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This response to comments document only addresses those comments which were submitted on the proposed land disposal restrictions for those waste codes and general BDAT technologies and issues which relate to Third Third Wastes Treatment Standards.

The commenters presented in this document are grouped according to major concerns of the commenters.

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FINAL
RESPONSE TO BDAT RELATED COMMENTS DOCUMENT

Leachates

VOLUME I-P

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May 1990

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INTRODUCTION

This response to comments document only addresses those comments which were submitted on the proposed land disposal restrictions for those waste codes and general BDAT technologies and issues which relate to Third Third Wastes Treatment Standards.

The commenters presented in this document are grouped according to major concerns of the commenters. This document is comprised of the following sections:

ISSUE CODE 1: General BDAT Aspects
ISSUE CODE 2: D001 - Characteristic Ignitable Wastes
ISSUE CODE 3: D002 - Characteristic Corrosive Wastes
ISSUE CODE 4: D003 - Characteristic Reactive Wastes and P and U Wastes Containing Reactive Listing Constituents
ISSUE CODE 5: D004/D010 - Characteristic Wastes for Arsenic and Selenium and K, P, and U Wastes Containing Arsenic and Selenium
ISSUE CODE 6: D005 - Characteristic Wastes for Barium and P013
ISSUE CODE 7: D006 - Characteristic Wastes for Cadmium
ISSUE CODE 8: D007 - Characteristic Wastes for Chromium
ISSUE CODE 9: D008 - Characteristic Wastes for Lead P and U Wastes Containing Lead
ISSUE CODE 10: D009 - Characteristic Wastes for Mercury P and U Wastes Containing Mercury
ISSUE CODE 11: K044, K045, K047: Wastes from the Manufacturing and Processing of Explosives
ISSUE CODE 12: D011 - Characteristic Wastes for Silver
ISSUE CODE 13: P119, P120 - Vanadium Containing Wastes
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ISSUE CODE 24: K011/K013/K014 - Acrylonitrile

ISSUE CODE 25: K015 - Still Bottoms from Benzal Chloride

ISSUE CODE 26: K021 - Spent Antimony Catalyst.

(No Comments Were Received for this Waste Code)

ISSUE CODE 27: K046 - WW Treatment Sludges from Manufacturing, Formulating, and Loading of Lead-Based Initiating Compounds

ISSUE CODE 28: K060 - Ammonia Still Lime Sludge.

(No Comments Were Received for this Waste Code)

ISSUE CODE 29: K061 - Electric Arc Furnace Dust

ISSUE CODE 30: K069 - Emission Control Dust/Sludge from Secondary Lead Smelting

ISSUE CODE 31: K071, K106 - Mercury Cell Process Wastes

ISSUE CODE 32: K073 - Chlorinated Hydrocarbon Wastes.

(No Comments Were Received for this Waste Code)

ISSUE CODE 33: K086 - Residues from Ink Formulation

ISSUE CODE 34: K100 - Waste Leaching Solution from Acid Leaching of Emission Control Dust/Sludge from Secondary Lead Smelting

(No Comments Were Received for this Waste Code)

ISSUE CODE 35: Wastes Containing Cyanide

ISSUE CODE 36: K017 - Wastes from the production of Epichlorohydrin

(No Comments Were Received for this Waste Code)

ISSUE CODE 37: K028,K029, K095, K096 - Production of 1,1,1-Trichloroethane

ISSUE CODE 38: Wastewaters containing BDAT Constituents

ISSUE CODE 39: K022 - Wastes from the Production of Phenol/Acetone

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(No Comments Were Received for this Waste Code)

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(No Comments Were Received for this Waste Code)

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(No Comments Were Received for this Waste Code)

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Commenters are identified by both commenter number and commenter name. Comments within each section of this document have been assigned a sequential comment number.

Issues were obtained from the original comment submittal and were categorized based on the grouping specified above. The Agency's response to each comment follows immediately after the text of the document. For responses related to capacity issues, the reader should review the "Response to Comments Background Document for the Third Third Land Disposal Restrictions Proposed Rule, November 22, 1989. Volume II Capacity Related Comments." For information regarding broad policy questions, the reader is directed to the "Response to Comments Background Document for the Third Third Land Disposal Restrictions Proposed Rule, November 22, 1989. Volume III Policy Related Comments."

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No Comments Were Received for this Waste Code

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  x. Use of WAO/Pact System Data for Multisource Leachate Standards
  xi. Higher Standard for Nickel

F.-. Permitting
  i. Promulgate Under HSWA as a Minor Permit Modification
  ii. Oppose Requirement to Reopen Hazardous Waste Disposal Permits

G.-. Other
  i. Allow Combination of Leachates to Facilitate Treatment
  ii. Supplemental Notice
  iii. Characterization of Wastes Placed in Pre-RCRA Units

ISSUE CODE 51: Leachates
(Continuation)

iv. Clarification of "Contaminated with" Regarding Multisource Leachate and Groundwater
v. Use of Effluent Guidelines Database
vi. Delay in Multisource Leachate Rule
vii. De Minimus Exemptions
viii. BDAT vs.BAT Effluent Guidelines

Comment Number: 51 - Ai - 1

Docket Number: LD12 - 00081

Commenter: ENVIROSAFE MANAGEMENT SERVICES, INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

The designation of a new waste code specific to the leachate would be appropriate and perhaps in the future could be sub-divided by treatability group.

Comment Number: 51-Ai-1

Docket Number: LD12-00081

Commenter: Envirosafe Management Services, Inc.

Isssue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles. In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

The Agency is not precluding the establishment of F039 treatability groups at some time in the future if the need for such becomes apparent. The Agency, however, lacks the time and resources necessary to establish F039 treatability groups and corresponding treatment standards within the time constraints of promulgating the Third Third final rule.

A few commenters opposed the proposed approach of establishing a separate wastecode (and corresponding treatment standards) for multi-source leachate, primarily because they believed it would impose a waste analysis burden on those facilities that managed leachate from the disposal of only a few known wastes. These comments are found in section 51-Aiii of this document.

Comment Number: 51-Ai-2

Docket Number: LD12-00090

Commenter: INTERNATIONAL TECHNOLOGY CORPORATION

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

IT believes, because of the impossibility to compile listed waste codes for multi-source leachate or derived from wastes (especially from older units), that a new waste code(s) should be developed for these wastes and the underlying individual listed waste codes dropped. It is likely that more than one set of treatment standards should be applied to different classes of leachates, depending on the source or character of the leachate. However, IT does not have data to recommend additional standards.

Comment Number: 51-Ai-2

Docket Number: LD12-00090

Commenter: International Technology Corporation

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating treatment standards under the separate waste code F039 for two categories of multi-source leachate, wastewaters and nonwastewaters. The Agency has no data indicating the need for further subcategorization of multi-source leachate beyond the wastewater/nonwastewater designations established in this final rule, therefore, no other treatability groups with corresponding treatment standards have been established.

The Agency is not precluding the establishment of F039 treatability groups at some time in the future. The Agency, however, lacks the time and resources (including data) necessary to establish F039 treatability groups and corresponding treatment standards within the time constraints of promulgating the Third Third final rule.

Comment Number: 51-Ai-3

Docket Number: LD12-00113

Commenter: MICHIGAN DISPOSAL, INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

LEACHATE WASTE CODE

A single code for multi-source leachate is the preferred approach for the following reasons:

a) The code will facilitate treatment for leachates from waste sites that may have received dioxin containing waste codes.
b) Leachate in no way resembles the chemical or physical form of the original wastes which are described by the codes that might be carried through for identification purposes.
c) TSD facilities that receive leachate may not be permitted to receive the codes descriptive of the original wastes. A single leachate code would enable

them to handle leachate wastes without elaborate permit revisions.
d) Such a code will adequately describe the leachate waste to ensure appropriate handling, transport and treatment nationwide.

Comment Number: 51-Ai-3

Docket Number: LD12-00113

Commenter: Michigan Disposal, Inc.

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating multi-source leachate treatment standards under the separate waste code F039 for wastewaters and nonwastewaters. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles. In response to the commenter's concern regarding the treatment of dioxin-containing leachates, the Agency agrees that multi-source leachate should not be subject to the management requirements for listed dioxin wastes (F021-F023 and F025-F028), except when the leachate is derived from any or all of the listed dioxin wastes and no other hazardous waste. The Agency has data indicating that the concentrations of dioxins in multi-source leachate are low (usually nondetectable), thus it believes that the special management requirements for listed acute dioxin wastes are not applicable to multi-source leachate.

The Agency agrees with the commenter that designating multi-source leachate under a single waste code will enable TSDFs to handle such leachate wastes without elaborate permit revisions. Existing permits may require some modification to add the F039 waste code. Such modifications requires the submission of a Class 1 modification (when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes) by the effective date (August 8, 1990). Additionally, the Agency is establishing in this final rule a new Class 1 permit modification (with prior approval) in order to provide an expeditious way to address the appropriate F039 waste analysis procedures (see item B(1)(b) in Appendix I to 40 CFR 270.42).

In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce on a nationwide basis. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that is assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

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Comment Number: 51-Ai-4

Docket Number: LD12-00124

Commenter: ROLLINS ENVIRONMENTAL SERVICES (DE) INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

Ultimately, EPA should establish a separate waste code for multi-source leachate, which would reduce the waste-code-carrythrough problem, without affecting environmental protection.

Cont.

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Comment Number: 51-Ai-4

Docket Number: LD12-00124

Commenter: ROLLINS ENVIRONMENTAL SERVICES (DE) INC. (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

Other Multi-Source Residues

EPA should also move to establish a similar approach, including a separate waste code, for each of the other multi-source treatment residues, such as incinerator ash and scrubber sludge. The waste-code-carrythrough nightmare is at least as severe a problem for the ash as for leachate.

Comment Number: 51-Ai-4

Docket Number: LD12-00124

Commenter: Rollins Environmental Services Inc.

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating multi-source leachate treatment standards under the separate waste code F039 for wastewaters and nonwastewaters. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects, based on public comment and other information provided during the First Third rule and related discussions, that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles. In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that is assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

A few commenters opposed the proposed approach of establishing a separate wastecode (and corresponding treatment standards) for multi-source leachate. These comments are found in section 51-Aiii of this document.

Comment Number: 51-Ai-5

Docket Number: LD12-00130

Commenter: WAYNE DISPOSAL, INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

LEACHATE WASTE CODE

A single code for multi-source leachate is the preferred approach for the following reasons:

a) The code will facilitate treatment for leachates from waste sites that may have received dioxin containing waste codes.

b) Leachate in no way resembles the chemical or physical form of the original wastes which are described by the codes that might be carried through for identification purposes.

c) TSD facilities that receive leachate may not be permitted to receive the codes descriptive of the original wastes. A single leachate code would enable them to handle leachate wastes without elaborate permit revisions.

d) Such a code will adequately describe the leachate waste to ensure appropriate handling, transport and treatment nationwide.

Comment Number: 51-Ai-5

Docket Number: LD12-00130

Commenter: Wayne Disposal, Inc.

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating multi-source leachate treatment standards under the separate waste code F039 for wastewaters and nonwastewaters. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles. In response to the commenter's concern regarding the treatment of dioxin-containing leachates, the Agency agrees that multi-source leachate should not be subject to the management requirements for listed dioxin wastes (F021-F023 and F025-F028), except when the leachate is derived from any or all of the listed dioxin wastes and no other hazardous waste. The Agency has data indicating that the concentrations of dioxins in multi-source leachate are low (usually nondetectable), thus it believes that the special management requirements for listed acute dioxin wastes are not applicable to multi-source leachate.

The Agency agrees with the commenter that designating multi-source leachate under a single waste code will enable TSDFs to handle such leachate wastes without elaborate permit revisions. Existing permits may require some modification to add the F039 waste code. Such modifications requires the submission of a Class 1 modification (when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes) by the effective date (August 8, 1990). Additionally, the Agency is establishing in this final rule a new Class 1 permit modification (with prior approval) in order to provide an expeditious way to address the appropriate F039 waste analysis procedures (see item B(1)(b) in Appendix I to 40 CFR 270.42).

In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce on a nationwide basis. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that is assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

Comment Number: 51-Ai-6

Docket Number: LD12-00158

Commenter: OCCIDENTAL CHEMICAL CORPORATION

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

C. EPA Should Use a Separate Waste Code for Multi-Source Leachate, and Should Make It Effective Under HSWA in All States To Avoid Permitting Problems.

EPA has requested comments on whether it should establish a separate waste code for multi-source leachate. (54 Fed. Reg. 48465) OxyChem supports this approach. Establishing a new waste code for multi-source leachate could significantly alleviate the administrative problems associated with matching the generator's waste codes with those permitted to be taken at a treatment/disposal facility, and in citing the required treatment for certification purposes. It is likely that as corrective actions increase and groundwaters are extracted from the areas around different solid waste management units, new waste codes will have to be added to permits to cover new derived-from wastes. It would be very helpful if permits could be modified just once to include a single code that would encompass all such multi-source leachate codes.

Comment Number: 51-Ai-6

Docket Number: LD12-00138

Commenter: Occidental Chemical Corporation

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating multi-source leachate treatment standards under the separate waste code F039 for wastewaters and nonwastewaters. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles. The Agency agrees with the commenter that designating multi-source leachate under a single waste code will enable TSDFs to handle such leachate wastes without elaborate permit revisions. Existing permits may require some modification to add the F039 waste code. Such modifications requires the submission of a Class 1 modification (when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes) by the effective date (August 8, 1990). Additionally, the Agency is establishing in this final rule a new Class 1 permit modification (with prior approval) in order to provide an expeditious way to address the appropriate F039 waste analysis procedures (see item B(1)(b) in Appendix I to 40 CFR 270.42).

In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce on a nationwide basis. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that is assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

Comment Number: 51-Ai-7

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

III.A.7.b.(2)
Multi-source leachate — separate waste codes

In Section III.A.7.b.(2) EPA proposes the use of separate waste codes for multi-source leachate wastewaters and nonwastewaters.

A. EPA should promulgate multi-source leachate standards using new, separate waste codes. This will greatly simplify recordkeeping for TSDFs that manage leachates that are derived from multiple listed wastes.

The Agency's proposed approach of establishing two waste codes for multi-source leachates (nonwastewater and wastewater) is a practical basis for regulating these wastes. The option 2 approach does not have the inherent contradictions of the option 1 approach, and results in streamlined recordkeeping for TSDFs. It offers protection of the environment and human health equal to that of the waste code-specific method of applying standards, because all hazardous constituents that could be present in a leachate may be regulated at BDAT levels.

Comment Number: 51-Ai-7

Docket Number: LD12-00151

Commenter: Gulf Coast Waste Disposal Authority

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles, and will make recordkeeping easier in that all the waste codes from which multi-source leachate is derived will no longer be required on notification forms (however, the constituents in F039 that are specified for regular analysis in the facility's waste analysis plan, and their corresponding treatment standards, will be included on such records).

Permit modifications (in most cases) should also be streamlined. Existing permits may need some modification to add the F039 waste code, requiring the submission of a Class 1 modification (when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes) by the effective date (August 8, 1990). Additionally, the Agency is establishing in this final rule a new Class 1 permit modification (with prior approval) in order to provide an expeditious way to address the appropriate F039 waste analysis procedures (see item B(1)(b) in Appendix I to 40 CFR 270.42).

In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

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Comment Number: 51-Ai-8

Docket Number: LD12-00159

Commenter: WASTE MANAGEMENT, INC., and CHEMICAL WASTE MANAGEMENT, INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

I. EPA Should Use Its HSWA Authority to Designate Multi-source Leachate as a Single-Waste Code (54 Fed. Reg. at 48,461-69)

EPA has proposed and solicited comment on two options for applying BDAT treatment standards to multi-source leachate: (1) application of the treatment standards for each waste code from which the leachate derived (Option 1) or (2) application of one fixed set of treatment standards for multi-source leachate (Option 2). 54 Fed. Reg. at 48,462. WMI not only supports Option 2, as discussed in the Comments of the Hazardous Waste Leachate Committee, but also urges the Agency to take the additional step it has under consideration of designating multi-source leachate as a distinct listed hazardous waste with a separate waste code. See id. at 48,465.

Cont.

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Comment Number: 51-Ai-8

Docket Number: LD12-00159

Commenter: WASTE MANAGEMENT, INC., and CHEMICAL WASTE MANAGEMENT, INC. (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

B. Assignment of a Separate Waste Code is Essential

Adoption of EPA's proposed Option 2 will provide partial relief from some of these problems. Nevertheless, without a separate waste code for multi-source leachate, adopted under HSWA, management of multi-source leachate in compliance with the land ban will still be an administrative nightmare and, in fact, may be impossible in some parts of the country. If the waste code carry-through principle is applied to multi-source leachate, every facility handling the leachate, or any residue thereof, must, in many states, be permitted to handle every waste code from which the leachate derives. Many treatment facilities that are suitable for treating multi-source leachate or its residues are not suitable for treating the wastes from which the leachate derives and, consequently, their permits do not contain the necessary "endless array" of wastes codes. Moreover, permit writers may be reluctant -- or even legally unable -- to add codes for wastes that should not be treated at a particular facility merely to enable that facility to handle leachate that theoretically "contains" those wastes. In short, a separate waste code is an indispensable part of the solution to the much-discussed leachate management predicament.

Comment Number: 51-Ai-8

Docket Number: LD12-00159

Commenter: Waste Management, Inc. and Chemical Waste Management, Inc.

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles. In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

A few commenters opposed the proposed approach of establishing a separate wastecode (and corresponding treatment standards) for multi-source leachate, primarily because they believed it would impose a waste analysis burden on those facilities that managed leachate from the disposal of only a few known wastes. These comments are found in section 51-Aiii of this document.

Comment Number: 51-Ai-9

Docket Number: LD12-00173

Commenter: CH$_2$M HILL

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

Fortunately, a simpler approach is now practicable. Through the cooperative efforts of the Leachate Committee and EPA, the data base on leachate and its treatment which did not exist in June 1988 is now available. That data base provides EPA with the information required to create a separate waste code for multi-source leachate and to establish separate wastewater and non-wastewater treatment standards.

Comment Number: 51-Ai- 9

Docket Number: LD12-00173

Commenter: CH2M Hill

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles. In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

A few commenters opposed the proposed approach of establishing a separate wastecode (and corresponding treatment standards) for multi-source leachate, primarily because they believed it would impose a waste analysis burden on those facilities that managed leachate from the disposal of only a few known wastes. These comments are found in section 51-Aiii of this document.

Comment Number: 51-Ai-10

Docket Number: LD12-00179

Commenter: THE DOW CHEMICAL COMPANY

Issue: OPTIONS FOR MULI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

B. EPA SHOULD ESTABLISH A SEPARATE WASTE CODE FOR MULTISOURCE LEACHATE.

EPA has requested comment on "whether multisource leachate should be redesignated by a separate waste code." 54 Fed. Reg. 48,465. Dow strongly supports a separate waste code for multisource leachate. A new waste code would alleviate many administrative problems associated with EPA's waste code carry-through principle and would be fully protective of human health and the environment.

Multisource leachate is frequently derived from large numbers of listed hazardous wastes. Consequently, if leachate is characterized as being all of the wastes from which it is derived, it may bear dozens or even hundreds of waste codes. The same would be true of all residues from treating the leachate, as well as all mixtures containing the leachate or its residues. Keeping track of all of those waste codes (e.g., on hazardous waste manifests,

biennial reports, and land disposal restriction certifications) would be an administrative nightmare. Moreover, it would often be impractical because most of the leachate currently being generated is derived from wastes that were disposed of long ago.

In sum, because keeping track of the waste codes associated with multisource leachate is difficult, if not impossible, and because such tracking may actually undermine environmental goals, EPA should not require facilities to engage in such in activity. Instead, the Agency should establish a separate waste code for multisource leachate.

Comment Number: 51-Ai-10

Docket Number: LD12-00179

Commenter: Dow Chemical Company

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles and will make recordkeeping easier in that all the waste codes from which multi-source leachate is derived will no longer be required on notification forms (however, the constituents in F039 that are specified for regular analysis in the facility's waste analysis plan, and their corresponding treatment standards, will be included on such records).

Permit modifications (in most cases) should also be streamlined. Existing permits may need some modification to add the F039 waste code, requiring the submission of a Class 1 modification (when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes) by the effective date (August 8, 1990). Additionally, the Agency is establishing in this final rule a new Class 1 permit modification (with prior approval) in order to provide an expeditious way to address the appropriate F039 waste analysis procedures (see item B(1)(b) in Appendix I to 40 CFR 270.42).

In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

Comment Number: 51-Ai-11

Docket Number: LD12-00180

Commenter: FORD MOTOR COMPANY

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

Multi-Source Leachate Treatment Standards (III.A.7)
Ford Motor Company recommends the establishment of a special waste code for multi-source leachate such as from a RCRA permitted landfill. Under this option, EPA would establish one set of wastewater treatment standards and another set of non-wastewater treatment standards specifying numerical levels for the entire list of BDAT constituents. On a site-specific basis, the EPA permit writer could establish standards for only those BDAT constituents that could reasonably be expected to be found in the facility waste stream (leachate).

Comment Number: 51-Ai-11

Docket Number: LD12-00180

Commenter: Ford Motor Company

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles. In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

A few commenters opposed the proposed approach of establishing a separate wastecode (and corresponding treatment standards) for multi-source leachate, primarily because they believed it would impose a waste analysis burden on those facilities that managed leachate from the disposal of only a few known wastes. These comments are found in section 51-Aiii of this document.

Comment Number: 51-Ai-12

Docket Number: LD12-00214

Commenter: BROWNING-FERRIS INDUSTRIES

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

D. Separate Leachate Waste Code and Permitting Issues:

BFI strongly supports the Agency's proposal to establish a new waste code for multi-source leachate. This is an important step in easing the administrative entanglement that the "waste code carry through" concept has created in matching waste codes. Indeed, the need for this change will grow even more important over time as RCRA corrective action activities increase.

Finally, it should be noted here that the Agency's approach to overlapping listed and characteristic wastes would further complicate the existing waste code matching problems for multi-source leachate (as well as for soil and debris) and underscores the importance of developing a separate, uniform code for leachate.

Comment Number: 51-Ai-12

Docket Number: LD12-00214

Commenter: Browning-Ferris Industries

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, and LD12-0168 from American Petroleum Institute). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles and will make recordkeeping easier in that all the waste codes from which multi-source leachate is derived will no longer be required on notification forms (however, the constituents in F039 that are specified for regular analysis in the facility's waste analysis plan, and their corresponding treatment standards, will be included on such records).

Permit modifications (in most cases) should also be streamlined. Existing permits may need some modification to add the F039 waste code, requiring the submission of a Class 1 modification (when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes) by the effective date (August 8, 1990). Additionally, the Agency is establishing in this final rule a new Class 1 permit modification (with prior approval) in order to provide an expeditious way to address the appropriate F039 waste analysis procedures (see item B(1)(b) in Appendix I to 40 CFR 270.42).

In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

Comment Number: 51-Ai-13

Docket Number: LD12-00224

Commenter: TEXACO INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

Texaco supports the proposal for development of a separate multi-source leachate category. For those landfills where numerous listed wastes were disposed (of which all are not known), a multi-source leachate designation would be more appropriate.

Comment Number: 51-Ai-13

Docket Number: LD12-00224

Commenter: Texaco Inc.

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, and LD12-0168 from American Petroleum Institute). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles and will make recordkeeping easier in that all the waste codes from which multi-source leachate is derived will no longer be required on notification forms (however, the constituents in F039 that are specified for regular analysis in the facility's waste analysis plan, and their corresponding treatment standards, will be included on such records).

Permit modifications (in most cases) should also be streamlined. Existing permits may need some modification to add the F039 waste code, requiring the submission of a Class 1 modification (when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes) by the effective date (August 8, 1990). Additionally, the Agency is establishing in this final rule a new Class 1 permit modification (with prior approval) in order to provide an expeditious way to address the appropriate F039 waste analysis procedures (see item B(1)(b) in Appendix I to 40 CFR 270.42).

In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

Comment Number: 51 - Ai - 14

Docket Number: LD12 -00253

Commenter: STATE OF NEW JERSEY, DEPT. OF ENVIRONMENTAL PROTECTION

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

Option three; establishing a separate waste code for multi-source leachate, seems a logical extension of option two. Once separate treatment standards have been established for multi-source leachate, it does not seem too great a leap to establish a separate waste code for these substances.

The main impact would seem to be on the record keeping requirements of the regulated community and, consequently, the tracking and data management capabilities of the regulating agencies. It is unclear, given the brevity of EPA's proposal, how much either group would gain or lose under this scenario. However, this proposal might best address the interests of both groups favored by scenarios one and two, since generators, on-site TSDFs and commercial TSDFs would only have to manifest, track and maintain records on one waste code. The analytical requirements should, likewise be simplified. However, this is dependent upon the treatment standards applied to this new code.

Therefore, the Department encourages EPA to develop this option, as a simplified, equitable approach. However, since applicable treatment standards will be quite important in a single waste code approach, the Department cannot fully endorse this option until those standards are specified.

Comment Number: 51-Ai-14

Docket Number: LD12-00253

Commenter: State of New Jersey, Dept. of Environmental Protection

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, and LD12-0168 from American Petroleum Institute). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles and will make recordkeeping easier in that all the waste codes from which multi-source leachate is derived will no longer be required on notification forms (however, the constituents in F039 that are specified for regular analysis in the facility's waste analysis plan, and their corresponding treatment standards, will be included on such records).

Permit modifications (in most cases) should also be streamlined. Existing permits may need some modification to add the F039 waste code, requiring the submission of a Class 1 modification (when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes) by the effective date (August 8, 1990). Additionally, the Agency is establishing in this final rule a new Class 1 permit modification (with prior approval) in order to provide an expeditious way to address the appropriate F039 waste analysis procedures (see item B(1)(b) in Appendix I to 40 CFR 270.42).

In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

Comment Number: 51-Ai-15

Docket Number: LD12-00268

Commenter: SHEA & GARDNER

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

The Agency should instead establish a new waste code for all multi-source leachate and groundwater contaminated by such leachate.

Comment Number: 51-Ai-15

Docket Number: LD12-00268

Commenter: Shea & Gardner

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles. In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

As to the commenter's reference to groundwater, EPA reiterates that a groundwater/multi-source leachate mixture is a hazardous waste so long as the multi-source leachate is contained in the groundwater. Such a mixture ordinarily would be prohibited from land disposal until treated to meet the treatment standards applicable to multi-source leachate.

A few commenters opposed the proposed approach of establishing a separate wastecode (and corresponding treatment standards) for multi-source leachate, primarily because they believed it would impose a waste analysis burden on those facilities that managed leachate from the disposal of only a few known wastes. These comments are found in section 51-Aiii of this document.

Comment Number: 51-Ai-16

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

D. **EPA Should Use A Separate Waste Code for Multi-Source Leachate, And Should Make It Effective Under HSWA In All States To Avoid Permitting Problems.**

EPA has requested comments on whether it should establish a separate waste code for multi-source leachate. 54 Fed. Reg. at 48,465. CMA supports this approach. Establishing a new waste code for multi-source leachate could significantly alleviate the administrative problems associated with matching the generator's waste codes with those permitted to be taken at a treatment/disposal site, and in citing the required treatment for certification purposes.

It is likely that as corrective actions increase and groundwaters are extracted from the areas around different solid waste management units, new waste codes will have to be added to permits to cover new derived-from wastes. It would be very helpful if permits could be modified just once to include a single code that would encompass all such multi-source leachate wastes.

Comment Number: 51-Ai-16

Docket Number: LD12-L007

Commenter: The Chemical Manufacturers Association

Issue: Options for Multi-source Leachate

Subissue: Support Establishing a Separate Waste Code

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, and LD12-0168 from American Petroleum Institute). The Agency is promulgating treatment standards for multi-source leachate wastewaters and nonwastewaters under the separate waste code F039. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles and will make recordkeeping easier in that all the waste codes from which multi-source leachate is derived will no longer be required on notification forms (however, the constituents in F039 that are specified for regular analysis in the facility's waste analysis plan, and their corresponding treatment standards, will be included on such records).

Permit modifications (in most cases) should also be streamlined. Existing permits may need some modification to add the F039 waste code, requiring the submission of a Class 1 modification (when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes) by the effective date (August 8, 1990). Additionally, the Agency is establishing in this final rule a new Class 1 permit modification (with prior approval) in order to provide an expeditious way to address the appropriate F039 waste analysis procedures (see item B(1)(b) in Appendix I to 40 CFR 270.42).

In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that it assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

Comment Number: 51-Ai-17

Docket Number: LD12-00168

Commenter: AMERICAN PETROLEUM INSTITUTE

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

III. A.7.f. - Separate Waste Code for Multi-Source Leachate

EPA requests comment on whether all multi-source leachate (however that term is defined) should be assigned a new, separate waste code or, alternatively, carry all of the waste codes for the listed wastes (or treatability groups) from which the leachate is derived. However, whether one waste code or numerous waste codes are assigned to such leachates, EPA proposes that treatment standards for such leachates consist of either: (a) all the standards applicable to each listed waste from which the leachate comes; or (b) one or two sets of standards that would apply to all multi-source leachates no matter what listed wastes generated the leachate.

API generally supports the idea of having a separate waste code for multi-source leachate for reasons of administrative simplicity and efficiency.[21]

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[21] In effect, separate waste codes should eliminate the so-called "waste code carry through principle as it applies to multi-source leachates. In addition, by establishing new waste codes for such leachates, EPA could, in effect, create a new listing for such wastes which, in turn, might be exempt from the "hard hammer" of section 3004(g)(6).

Comment Number: 51-Ai-17

Docket Number: LD12-00168

Commenter: **American Petroleum Institute**

Issue: **Options for Multi-source Leachate**

Subissue: **Support Establishing a Separate Waste Code**

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating multi-source leachate treatment standards under the separate waste code F039 for wastewaters and nonwastewaters. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status.

The commenter's suggestion that a new waste code for multi-source leachate would be a new listing for purposes of the hard hammer is unfounded. The hard hammer, as EPA interprets the statute, applies to all wastes that were hazardous at the time of enactment of the HSWA amendments. Leachate derived from disposal of listed hazardous wastes at that time. Such leachate, therefore, is subject to the hard hammer. The Agency views the establishment of the F039 waste code merely as a bookkeeping change in the way it designates a type of waste that is already listed and identified.

Comment Number: 51 - Ai - 18

Docket Number: LD12 - C0147

Commenter: INSTITUTE OF CHEMICAL WASTE MANAGEMENT

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT ESTABLISHING A SEPARATE WASTE CODE

Comment:

MULTI-SOURCE LEACHATE

The preamble to the proposed rule defines multi-source leachate as ... "leachate that is derived from the treatment, storage, disposal, or recycling of more than one listed hazardous waste". The Institute supports the concept of this definition.

In every case, the Institute has supported a recommendation that the Agency establish separate waste codes for multi-source residues including leachate, incinerator ash, scrubber water, and contaminated environmental media.

The Institute also strongly supports the proposal to establish a separate code for multi-source leachate. The members of ICWM believe that a single code is essential for the following reasons:

o For any waste code that may have designated dioxin in the original waste, this code must carry-through even though dioxin may not be present in the leachate. Because no treatment or disposal facility will accept dioxin wastes, the code-carrythrough creates a major management problem.

o Not all facilities that may wish to treat leachate or dispose of the treated residue would necessarily have all of the existing codes in the facility permit. Therefore, modifications to the permits would be necessary before the leachate could be treated and the residue disposed. As no state has yet adopted the new federal rule for permit modifications, receiving even such simple permit changes can be difficult and can take several months.

o The chemical and physical form of leachate in no way resembles the chemistry and physical form of the original waste from which the code was derived. Therefore, requiring application of LDR standards developed for a single waste stream to leachate that carries these codes is not reasonable.

o For facilities with pre-RCRA units, there is no way to classify leachate as specific waste codes.

Comment Number: 51-Ai- 18

Docket Number: LD12-00164

Commenter: Institute of Chemical Waste Management

Issue: **Options for Multi-source Leachate**

Subissue: **Support Establishing a Separate Waste Code**

Response:

The public comments overwhelmingly supported EPA's proposal to establish a separate waste code for multi-source leachate (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries). The Agency is promulgating multi-source leachate treatment standards under the separate waste code F039 for wastewaters and nonwastewaters. This does not mean that such waste is newly identified or listed for purposes of RCRA hammers, or other RCRA purposes such as eligibility for interim status. Rather, the Agency is making a bookkeeping change in the way it designates a type of waste that is already listed and identified.

EPA expects that a separate waste code designation for multi-source leachates will mean that treatment and disposal facilities will face fewer administrative obstacles. In response to the commenter's concern regarding the treatment of dioxin-containing leachates, the Agency agrees that multi-source leachate should not be subject to the management requirements for listed dioxin wastes (F021-F023 and F025-F028), except when the leachate is derived from any or all of the listed dioxin wastes and no other hazardous waste. The Agency has data indicating that the concentrations of dioxins in multi-source leachate are low (usually nondetectable), thus it believes that the special management requirements for listed acute dioxin wastes are not applicable to multi-source leachate.

The Agency agrees with the commenter that designating multi-source leachate under a single waste code will enable TSDFs to handle such leachate wastes without elaborate permit revisions. Existing permits may require some modification to add the F039 waste code. Such modifications requires the submission of a Class 1 modification (when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes) by the effective date (August 8, 1990). Additionally, the Agency is establishing in this final rule a new Class 1 permit modification (with prior approval) in order to provide an expeditious way to address the appropriate F039 waste analysis procedures (see item B(1)(b) in Appendix I to 40 CFR 270.42).

In addition, a separate waste code will make the multi-source leachate regulations easier to implement and enforce on a nationwide basis. A further advantage of establishing a separate waste code (and corresponding treatment standards) is that is assures treatment of all hazardous constituents that may be present in the multi-source leachate, a result less certain under the waste code carry-through approach.

Comment Number: 51- Aii -1

Docket Number: LD12-00081

Commenter: ENVIROSAFE MANAGEMENT SERVIEES, INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

Page 48461, 7. The Agency proposes several options for addressing multi-source leachate. We strongly recommend option 2 in which a separate standard is set up for multiple source leachate. These standards should be based upon the constituents actually found in the leachate, not the codes that went into the landfill.

Comment Number: 51-Aii-1

Docket Number: LD12-00081

Commenter: Envirosafe Management Services, Inc.

Issue: Options for Multi-Source Leachate

Subissue: Supports Option 2, Separate Treatment Standards

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

Comment Number: 51-Aii-2

Docket Number: LD12-00124

Commenter: ROLLINS ENVIRONMENTAL SERVICES (DE) INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

MULTI-SOURCE LEACHATE AND OTHER MULTI-SOURCE RESIDUES

Leachate

RES favors the alternative of establishing one set of wastewater and of nonwastewater treatment standards for multi-source leachate. This would be a step in the direction of simplifying the unnecessary paperwork and analytical requirements for multi-source leachate.

However, not a great deal is gained and no environmental purpose is served, if all of the constituents on the proposed multi-source leachate treatment standard list must be regularly tested for in the treatment residues -- in order to ascertain whether the standards are met -- in circumstances where those constituents are not in the leachate itself. Since leachate from a given landfill will not vary greatly in its constituents over time, it should be possible to determine which of the constituents on the list actually are in the leachate. Once this has been determined, then it should only be necessary to check the residues from treating the leachate for those particular constituents. EPA should make clear that this is an acceptable approach.

Comment Number: 51-Aii-2

Docket Number: LD12-00124

Commenter: Rollins Environmental Services (DE) Inc.

Issue: Options for Multi- Source Leachate

Subissue: Supports Option 2, Separate Treatment Standards

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

Comment Number: 51-Aii-3

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

B. GCA believes that the option 2 approach to multi-source leachate standards could be structured in such a way so that it does not place a heavy burden on those TSDFs whose leachate is derived from a small number of listed wastes.

Comment Number: 51-Aii-3

Docket Number: LD12-00151

Commenter: Gulf Coast Waste Disposal Authority

Issue: Options for Multi-Source Leachate

Subissue: Supports Option 2, Separate Treatment Standards

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

Comment Number: 51-Aii-4

Docket Number: LD12-00157

Commenter: ASSOCIATION OF STATE $ TERRITORIAL SOLID WASTE MANAGEMENT OFFICIALS

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

2. **Multi-Source Leachates**

The ASTSWMO LDR Task Force feels that multi-source leachate is a very significant element in not only the RCRA hazardous waste management program but in CERCLA and other State managed cleanup programs as well. State program managers will not only have to deal with active operating RCRA sites, where wastes may be reasonably well known, but also with many closed or inactive sites where the wastes which those sites accepted are not well identified.

For instance, a closed "municipal" landfill which is subject to remedial action under CERCLA may have accepted significant quantities of hazardous waste, but due to a lack of recordkeeping the operators do not know which wastes they accepted, or how much of those wastes. In this instance application of the waste code principle would not be practical or even possible. Therefore, because of problems like this and other similar situations, the Task Force supports establishing one set of treatment standards for multi-source leachate and treatment residues. Establishing one set of standards would be more environmentally sound and would also be administratively workable -- something which the waste code principle has not been to date.

Comment Number: 51-Aii-4

Docket Number: LD12-00157

Commenter: Association of State & Territorial Solid Waste Management Officials

Issue: Options for Multi-Source Leachate

Subissue: Supports Option 2, Separate Treatment Standards

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

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Comment Number: 51-Aii-5

Docket Number: LD12-00159

Commenter: WASTE MANAGEMENT INC., AND CHEMICAL WASTE MANAGEMENT, INC.

Issue: OPTIONS FOR MULTI-SOURCE Leachate

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

A. Option 2 is the Only Option

As EPA has recognized in the preamble to this proposed rule, the "seemingly endless array of waste combinations" found in large hazardous waste landfills produces "administrative complications" under Option 1. In fact, these administrative complications are so severe that CWM and Browning-Ferris Industries, Inc. (BFI) were able to establish their entitlement to the extraordinary relief of a stay of the application to multi-source leachate of EPA's First-Third rule, which embodied Option 1. See id. at 48,462. The motions and exhibits CWM and BFI filed with the D.C. Circuit on August 9 and 10, 1988, which are incorporated herein by reference, detail those administrative complexities. In summary, the practical difficulties attaching to Option 1 include:

cont.

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Comment Number: 51-Aii-5

Docket Number: LD12-00159

Commenter: WASTE MANAGEMENT, INC., and CHEMICAL WASTE MANAGEMENT, INC. (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

1. The burden and confusion that inevitably results simply from having to consult hundreds of treatment standards (which contain varying levels for the same constituents) to determine the "target" for treating multi-source leachate;

2. The practical difficulty of treating multi-source leachate to meet standards that take no account of complicating factors such as chemical and physical changes that take place in a landfill, or contributions of constituents from characteristic hazardous wastes or even nonhazardous wastes;

3. The absence of many waste codes attaching to multi-source leachate under Option 1 from the permits of many treatment facilities; and

4. The application of special management requirements to leachate that bears dioxin codes regardless of the absence or concentration of dioxin constituents in the multi-source leachate.

Comment Number: 51-Aii-5

Docket Number: LD12-00159

Commenter: Waste Management Inc., and Chemical Waste Management, Inc.

Issue: Options for Multi-Source Leachate

Subissue: Supports Option 2, Separate Treatment Standards

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

Comment Number: 51-Aii-6

Docket Number: LD12-00168

Commenter: AMERICAN PETROLEUM INSTITUTE

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

(b) EPA also requests comments on whether treatment standards for multi-source leachates (however that term is defined) should be the same standards applicable to all the original waste codes from which the leachate derived (Option 1), or whether EPA should establish one set of treatment standards for wastewater and one set of standards for non-wastewater for all multi-source leachates (Option 2).

API opposes Option 1 which would be totally impractical for treating multi-source leachates that would require several different treatment technologies. In some cases, if this option was required, the waste would have to be treated by several different treatment trains and then incinerated to meet concentration-based limits.

Comment Number: 51-Aii-6

Docket Number: LD12-00168

Commenter: American Petroleum Institute

Issue: Options for Multi-Source Leachate

Subissue: Supports Option 2, Separate Treatment Standards

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

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Comment Number: 51-Aii-7

Docket Number: LD12-00173

Commenter: CH2M HILL

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

III. THE NEED FOR A SEPARATE WASTE CODE AND TREATMENT STANDARD

EPA has proposed and asked for comment on two very different approaches to establishing BDAT standards for multi-source leachate and residues from leachate treatment. One approach--initially promulgated with the First Third--is to employ the "waste code carry-through principle," thereby applying to multi-source leachate all of the treatment standards assigned to the land-disposed wastes from which the leachate is derived. The second approach is to establish one fixed set of wastewater treatment standards and one fixed set of non-wastewater treatment standards to be applied to all multi-source leachate and treatment residues. (54 Fed. Reg at 48462)

Quite clearly, this choice constitutes the most critical issue in the regulation of multi-source leachate. The Leachate Committee has made a major investment of staff time and contract and analytical resources because it strongly believes that the initial approach--the carry-through of waste-specific treatment standards to multi-source leachate derived from many distinct wastes--is an inappropriate. unscientific, and unworkable approach.

The Committee recognized that, at the time of promulgation of the First Third regulations, EPA had relatively little data on multi-source leachates and their treatment. What data was available to the Agency could be judged insufficient to establish a separate standard. As a result, an approach that negated the need for additional data by presumptively employing data transfer using the "waste code carry-through principle" was selected.

Following a review of the legal, technical, and administrative implications. it became clear that the waste code carry-through approach would cause irreparable harm to the regulated community unless significant changes were made. A stay was sought and secured.

The difficulties that were identified prior to the stay would still exist if the "waste code carry-through principle" were to be chosen for the Third Third rule. Accordingly, it is critical to understand the formidable difficulties which this approach entails. These difficulties can be summarized as follows:

1. In the Committee's view, EPA lacks a sound basis for assuming that treatment standards for single wastestreams containing particular concen-

cont.

Comment Number: 51-Aii-7

Docket Number: LD12-00173

Commenter: CH2M HILL (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

trations of specific hazardous constituents would be appropriate or achievable for complex, highly dilute mixtures of constituents from hundreds of wastes.

- This assumption relies on the legally questionable theory that leachate is deemed to be all of the underlying wastes, irrespective of whether leachate meets any of the criteria for listing those wastes.

- This assumption also violates the fundamental technical principle set forth in EPA's framework for the establishment of BDAT (51 Fed. Reg. 40, 573; 40, 588-90 (November 7, 1986)) that the type and level of treatment depends on the chemical and physical character of the waste. Leachate derived from a multi-source land disposal facility bears no chemical or physical resemblance to the original listing characterization of wastes disposed there.

The use of a "derived from" standard might be rational for monofill disposal of wastes of a single code, but it loses all rationality for the vast majority of multi-source leachate sites that contain hundreds of listed wastes. Only in the monofill case is leachate a dilute form of one single waste; in virtually all other cases multi-source leachate is a mixture of constituents leached at varying rates from hundreds of wastes.

2. When examined in terms of its practicality and implementability, the "waste code carry-through approach" presents critical problems.

- Most multi-source waste disposal facilities contain hundreds of wastes. To take several Chemical Waste Management facilities as an example: Model City has handled 150 waste codes; Emelle in one cell has 266 waste codes; and Lake Charles has handled 462 listed wastes.

- Given the diversity of waste codes, the facility would be required to treat to the lowest level established for any of the underlying wastes. The existing range for different waste codes is broad. For chromium, for example, the level for K086 is .094 mg/l compared to 5.2 mg/l for a subcategory of K101 and K102.

Cont.

Comment Number: 51-Aii-7

Docket Number: LD12-00173

Commenter: CH2M HILL (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

3. From an administrative standpoint, any facility that treats multi-source leachate would need to have its permit amended so as to allow it to take virtually every listed waste. If just one waste code were missing, the treatment facility would be in technical violation. Such an amendment process does not appear to serve any useful purpose other than to legitimize the "derived from" approach. Until permit changes were approved, treatment of leachate would have to be conducted in violation of RCRA regulations.

4. Certain treatment facilities are unwilling to accept particular waste streams for fear that the facility will be contaminated. A good example is publicly owned treatment works which are increasingly unwilling to accept multi-coded hazardous wastewaters due to their fear that EPAs' derived-from rule will be applied to them. Similarly, commercial incineration firms are reluctant to accept leachate residuals having multiple waste codes associated with them, particularly codes having heavy metal standards. Also, at least one carbon regeneration firm is resisting acceptance of P-coded activated carbon that was utilized for leachate treatment. A land disposal facility containing hundreds of wastestreams could find that practical management of its leachate is impossible.

In the Third Third preamble, EPA has acknowledged the administrative complexities that would be caused by the "derived-from" rule:

> "Administration complications can arise from applying these standards based on the vast number of potentially applicable treatment standards and the various combinations and permutations of applicable treatment standards. This is further complicated if more than one standard exists for a particular constituent, since the most stringent standard then applies (see section 268,.41(b)). Because of the variety in potential applicable treatment standards due to the wide variety of combinations of waste codes, the Agency cannot present, in today's preamble, all of the options of treatment standards that would apply for all combinations of waste." (54 Fed. Reg. at 48463)

In summary, at the time that the First Third was promulgated, use of the "derived-from" rule had the apparent advantage of allowing EPA to establish

cont.

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Comment Number: 51-Aii-7

Docket Number: LD12-00173

Commenter: CH2M HILL (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2 SEPARATE TREATMENT STANDARDS

Comment:

treatment standards for leachate without conducting an analysis of multi-source leachate or its treatment: What was good for the waste would be decreed to be good for its leachate. The result with respect to multi-source leachate, however, was a morass of legal, technical, and administrative problems. Multi-source leachate, by its nature, is generally produced from land disposal facilities containing hundreds of wastes. An approach based on the "derived-from" rule requires that the identity of these hundreds of wastes be maintained throughout the treatment and management process, with all of the technical, legal, permitting, and administrative complexity that this entails. Sound regulatory policy requires a simpler and more scientifically principled approach.

The data base clearly indicates that multi-source leachate is diverse. Table I presents the average concentration of each BDAT compound in five leachate streams. Table I shows that average compound concentrations commonly vary by a factor of 10 and 100 and in some cases (such as arsenic, chloroform, cyanides, isobutanol, and sulfide) by a factor of 1,000.

cont.

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Comment Number: 51-A ii -7

Docket Number: LD12-00173

Commenter: CH_2M HILL (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

The data base also shows that it is practicable to establish one fixed standard for wastewater and non-wastewater for multi-source leachate. Appropriate values are discussed in Section V.

cont.

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Comment Number: 51-Aii·7

Docket Number: LD12-00173

Commenter: CH2M HILL (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

TABLE I
AVERAGE CONCENTRATION OF MEASUREMENT "HITS"
ON LEACHATE (in ppb)

BDAT NO.	PREFIX	COMPOUND	CWM/WMNA LEACHATES			DOW LEACHATE	BFI LEACHATE
			CID2	MC96	BSCALE		
222		Acetone	5860.0	12233.333	9133.333	713.333	160000.0
53		Acetophenone	35.0			51.0	
3		Acrylonitrile				140.0	
56		Aniline	3133.333	460.0			
154		Antimony				75.0	
155		Arsenic	90.667	89.333	9913.333	15.0	4000.0
156		Barium	236.667	143.333	38.333	656.667	4000.0
4		Benzene		28.0	39.0	270.0	530.0
157		Beryllium			5.0		29.0
173		BHC-alpha		3.5			120.0
176		BHC-gamma		18.15			
67		Bis(2-chloroethoxy)methane				590.0	
70		Bis(2-ethylhexyl)phthalate	15.0			46.667	
5		Bromodichloromethane				3.0	
71	4-	Bromophenyl phenyl ether				20.667	
223	n-	Butyl alcohol	2800.0	2200.0	6008.5	1700.0	34000.0
158		Cadmium		68.333	141.0		83.0
8		Carbon disulfide			10.0		
7		Carbon tetrachloride				33.0	440.0
74	p-	Chloroaniline					9900.0
9		Chlorobenzene		29.0		470.0	4500.0
11		Chlorodibromomethane				9.0	
14		Chloroform		195.0	5.2	250.2	3300.0
15		Chloromethane				1290.0	
78	2-	Chlorophenol				24.333	
159		Chromium (total)	103.0	58.0	162.0	18.0	190.0
221		Chromium, VI		8.0	516.667	11.0	17.0
160		Copper	35.667		61.0		35.0
81	o-	Cresol	123.0	296.667			3500.0
82	p-	Cresol	640.0	1183.333			12000.0
169		Cyanides (total)	130.0	236.667	24666.667	30.0	290.0
84		Dibenzo(a,e)pyrene		0.035			
85		Dibenzo(a,i)pyrene		0.53			
18	1,2-	Dibromoethane				6.0	
19		Dibromomethane				39.333	
88	p-	Dichlorobenzene				302.0	
86	1,3-	Dichlorobenzene				114.2	
87	1,2-	Dichlorobenzene				384.0	2200.0
22	1,1-	Dichloroethane		150.0	186.667		
23	1,2-	Dichloroethane		90.0	620.0	19.0	2100.0
25	Trans-1,2-	Dichloroethene				10.0	1100.0
24	1,1-	Dichloroethylene				4815.333	
90	2,4-	Dichlorophenol			570.0	212.0	4400.0
182	2,4-	Dichlorophenoxyacetic acid			1100.0	320.0	
28	1,2-	Dichloropropane				8.5	
98	2,4-	Dimethylphenol	41.5	275.0		100.0	4800.0
100	4,6-	Dinitro-o-cresol				10.0	
29	1,4-	Dioxane				1000.0	25000.0
219		Diphenylnitrosamine				19.0	280.0
226		Ethyl benzene		39.0		137.2	370.0
227		Ethyl ether				64.0	3900.0
224	2-	Ethoxyethanol					40000.0
108		Fluoranthene				9.0	

cont.

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Comment Number: 51-Aii-7

Docket Number: LD-00173

Commenter: CH2M HILL (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

TABLE I (CONTINUED)
AVERAGE CONCENTRATION OF MEASUREMENT "HITS"
ON LEACHATE (in ppb)

BDAT NO.	PREFIX	COMPOUND	CWM/WMNA LEACHATES			DOW LEACHATE	BFI LEACHATE
			CID2	MC06	BSCALE		
109		Fluoranthene				9.0	
170		Fluoride	1850.0	2200.0	78333.333	3530.0	520.0
110		Hexachlorobenzene				36.667	
111		Hexachlorobutadiene				11.0	
208		Hexachlorodibenzo-furans		0.013	0.019	0.2	
207		Hexachlorodibenzo-p-dioxins			0.021		
33		Isobutanol	8933.333	4833.333	3.9		6500.0
189		Kepone			200.0		
161		Lead	27.333	17.0	25.333		1400.0
162		Mercury	0.2	2.4	1.4		0.7
228		Methanol	15666.667	24666.667	21666.333	46200.0	470000.0
34		Methyl ethyl ketone	8166.667	9033.333	7066.667	213.333	170000.0
229		Methyl isobutyl ketone	3800.0	8200.0	2166.667		
38		Methylene chloride	820.0	3066.667	1766.667	2440.0	13000.0
121		Naphthalene	53.5			80.0	
163		Nickel	250.0	650.0	656.667		110.0
198		Parathion				9.0	
205		PCB-Aroclor 1254		30.0			
206		PCB-Aroclor 1260			170.0		
136		Pentachlorobenzene				66.8	
210		Pentachlorodibenzo-furans		0.097	0.032		
139		Pentachlorophenol				59.667	
141		Phenanthrene				10.5	
142		Phenol	1780.0	10800.0	18333.333	1472.0	180000.0
220		Phthalic anhydride (as acid)		32000.0	37450.0		
143	2-	Picoline	61.0				
145		Pyrene				7.0	
39		Pyridine			1200.0		
164		Selenium	4.6 /	7.9	78.667	2.0	37.0
165		Silver			15.0	8.0	
193		Silvex				3.0	
171		Sulfide	5800.0	6800.0	2300.0	27066.667	60000.0
148	1,2,4,5-	Tetrachlorobenzene				208.0	
213	2,3,7,8-	Tetrachlorodibenzo-p-dioxin			0.034		
211		Tetrachlorodibenzo-p-dioxins			0.046		
212		Tetrachlorodibenzofurans		0.062	0.03	0.4	
41	1,1,2,2-	Tetrachloroethane		816.667			
42		Tetrachloroethene		69.0		27.4	2400.0
149	2,3,4,6-	Tetrachlorophenol				41.0	
168		Thallium			3.9	110.0	
43		Toluene	430.0	473.333	176.667	1058.0	8700.0
44		Tribromomethane				9.0	
150	1,2,4-	Trichlorobenzene		110.0		340.0	300.0
46	1,1,2-	Trichloroethane		67.0			
45	1,1,1-	Trichloroethane	160.0	110.0		20.5	
47		Trichloroethylene		383.333		8.5	6800.0
151	2,4,5-	Trichlorophenol				25.0	
152	2,4,6-	Trichlorophenol				26.0	
194	2,4,5-	Trichlorophenoxyacetic acid				6.0	
49	1,2,3-	Trichloropropane				12.0	
167		Vanadium	42.333		40.5		
50		Vinyl Chloride		71.0	11.0	47.5	450.0

cont.

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Comment Number: 51-Aii-7

Docket Number: LD12-00173

Commenter: CH2M HILL (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

TABLE I (CONTINUED)
AVERAGE CONCENTRATION OF MEASUREMENT "HITS" ON LEACHATE (in ppb)

BDAT NO.	PREFIX	COMPOUND	CWM/WMNA LEACHATES			DOW LEACHATE	BFI LEACHATE
			CID2	MC06	BSCALE		
215	1,2-	Xylene	323.333	300.0	9.2		
216	1,3-	Xylene			12.0		
217	1,4-	Xylene			12.0		
168		Zinc	2460.0	296.667	158.0	428.333	64.0
		Xylenes (total)				295.8	700.0

Comment Number: 51-Aii-7

Docket Number: LD12-00173

Commenter: CH2M Hill

Issue: Options for Multi-Source Leachate

Subissue: Supports Option 2, Separate Treatment Standards

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

Comment Number: 51-Aii-8

Docket Number: LD12-00179

Commenter: THE DOW CHEMICAL COMPANY

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

Keeping track of the waste codes would also not serve to protect human health and the environment. The primary significance of EPA's waste codes is that the codes indicate which treatment standards apply to specific hazardous wastes. If, as proposed, EPA establishes a single set of treatment standards for all multisource leachate, regardless of source, all such leachate should have the same waste code. No purpose would be served by requiring facilities to determine and then keep track of waste codes that have no regulatory significance.

cont.

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Comment Number: 51-Aii-8

Docket Number: LD12 - 00179

Commenter: THE DOW CHEMICAL COMPANY (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

Indeed, keeping track of the waste codes for multisource leachate could actually serve to frustrate environmental goals. Under EPA's waste code carry-through principle, if multisource leachate bears vast numbers of waste codes, those waste codes will carry over to any mixtures containing multisource leachate.

Comment Number: 51-Aii-8

Docket Number: LD12-00179

Commenter: The Dow Chemical Company

Issue: Options for Multi-Source Leachate

Subissue: **Supports Option 2, Separate Treatment Standards**

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

Comment Number: 51-Aii-9

Docket Number: LD12-00214

Commenter: BROWNING-FERRIS INDUSTRIES

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

C. Options for Setting BDAT

For setting the BDAT levels themselves, the Agency has proposed an option under which EPA would continue to apply to leachate the BDAT applicable to the underlying waste; the Agency's other option would be to establish uniform BDATs for leachates, one for wastewater and one for non-wastewater. As we have detailed in other comments,[10] we believe the latter option is the better approach.

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[10] Comments submitted by BFI, dated June 16, 1988 and May 23, 1988, docket numbers F-88-LDR7 and 8-FFFFF.

Comment Number: 51-Aii-9

Docket Number: LD12-00214

Commenter: Browning-Ferris Industries

Issue: Options For Multi-Source Leachate

Subissue: Supports Option 2, Separate Treatment Standards

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

Comment Number: 51-Aii-10

Docket Number: LD12-00224

Commenter: TEXACO INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

Development of BDAT Standards - Regarding development of BDAT standards for multi-source leachate, Texaco strongly supports Option 2 for which one set of standards is established for wastewaters and non-wastewaters of multi-source leachates with the permit writer having the flexibility to define those BDAT constituents for which the leachate should be tested and the frequency of said tests.

Comment Number: 51-Aii- 10

Docket Number: LD12-00224

Commenter: Texaco Inc.

Issue: Options for Multi-Source Leachate

Subissue: **Supports Option 2, Separate Treatment Standards**

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

Comment Number: 51-A11-11

Docket Number: LD12-00164

Commenter: INSTITUTE OF CHEMICAL WASTE MANAGEMENT

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORTS OPTION 2, SEPARATE TREATMENT STANDARDS

Comment:

The Institute has long expressed concern about the Agency's original approach for multi-source leachate. As the Agency began developing LDR standards, it imposed a policy that would require applying all standards for the original waste codes from which the leachate was derived.

As early as May 1988, the Institute provided the Agency with information about the difficulty of applying this initial "code carry-through" policy (i.e., ICWM's letter to S. Lowrance, 5 May, 1988). Member concerns were reiterated during a meeting with Mr. Lee Thomas, then Administrator of EPA (i.e., NSWMA's letter to L. Thomas, 29 July, 1988). In August of that year, NSWMA joined with its members in legal action against the Agency on leachate related issues.

In each of these documents, the members have expressed concern about the difficulties and unjustified burdens that result when attempting to apply multi-source standards to leachate.

Therefore, the Institute strongly supports the Agency proposal to establish one set of wastewater standards and one set of non-wastewater standards for multi-source leachate. The standards would allow treatment of leachate in the form of wastewater using any treatment technology. Those technologies the Agency may recommend include wet-air oxidation, biological treatment followed by carbon adsorption, or incineration. The second set requires treatment of non-wastewater residues derived from treated leachate as incineration for organic constituents and stabilization for inorganic constituents.

Comment Number: 51-Aii- 11

Docket Number: LD12-00164

Commenter: Institute of Chemical Waste Management

Issue: Options for Multi-Source Leachate

Subissue: Supports Option 2, Separate Treatment Standards

Response:

The Agency believes, and commenters have supported the view (see for example comments LD12-00151 from Gulf Coast Waste Disposal Authority, LD12-00167 from Westinghouse Electric Corporation, LD12-0168 from American Petroleum Institute, and LD12-00214 from Browning-Ferris Industries), that multi-source leachate is sufficiently unique as to require separate standards rather than the use of "waste code carry-through". Therefore, the Agency is promulgating separate treatment standards for wastewater and nonwastewater forms of multi-source leachate. Separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the wastewater treatment performance data available at the time of proposal either in the Background Document for Wastewaters Containing BDAT List Constituents or in the docket for the proposed rule (i.e. performance data on the treatment of multi-source leachate wastewaters) best represents the levels of treatment that can be achieved for wastewaters such as multi-source leachates. Therefore, incineration scrubber water data, which was considered as a treatment option at proposal, will not be used to determine promulgated multi-source leachate wastewater BDAT standards.

Some of the commenters who supported the separate treatment standards (Option 2) expressed concern that the use of one set of BDAT List constituent standards for multi-source leachate might require sampling and analysis of all BDAT List constituents in all cases. This will not be required in most cases, however, because the Agency is allowing maximum flexibility to the permit writers to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

Comment Number: 51-Aiii-1

Docket Number: LD12-00143

Commenter: GENERAL MOTORS CORPORATION

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT FOR OPTION 1, CONTINUED APPLICATION OF WASTE CODE CARRY-THROUGH

Comment:

Of the two options proposed for applicability of BDAT treatment standards for multi-source leachate (page 48462), we recommend that the first option be adopted, i.e., continued application of only those treatment standards for the waste codes which are land disposed.

Comment Number: 51-Aiii-1

Docket Number: LD12-00143

Commenter: General Motors Corporation

Issue: Options for Multi-Source Leachate

Subissue: Support for Option 1, Continued Application of Waste Code Carry-through

Response:

The Agency is not adopting the waste code carry-through option for regulation of multi-source leachate. The waste code carry-through option would complicate determinations of which standards apply to multi-source leachates where multiple standards exist for the same constituent. Additionally, the Agency believes that the waste code carry-through option would be harder to implement and enforce than an option based on a separate multi-source leachate standard.

Commenters supporting the waste code carry-through option were concerned that facilities generating or treating multi-source leachates derived from a limited number of waste codes would be subject to unnecessary analysis requirements. Using the separate multi-source leachate standards option need not overly burden facilities in this category. Under the promulgated approach, the permit writer will have maximum flexibility to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

Comment Number: 51-Aiii-2

Docket Number: LD12-00187

Commenter: METAL CATALYSTS PRODUCERS

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT FOR OPTION 1, CONTINUED APPLICATION OF WASTE CODE CARRY-THROUGH

Comment:

6. EPA Should Continue "Option 1" For Multi-Source Leachate.

EPA asks whether it should retain its current "Option 1" approach to treatment of multi-source leachate whereby the treatment standards must be met for each hazardous waste in multi-source leachate. Alternatively, EPA requests comment on "Option 2" whereby it would establish one set of treatment standards for a wastewater multi-source leachate and another set for a nonwastewater multi-source leachate and require that the applicable set of treatment standards be met for over two hundred constituents that may be in the leachate. See 54 Fed. Reg. at 48,462/3.

Whether or not EPA adopts Option 2, it should continue Option 1 of allowing one to meet the treatment standards that apply only to the specific hazardous wastes in the multi-source leachate. This option would be critical in the following very plausible scenario for metal catalyst manufacturers. Suppose leachate derives from two or more listed hazardous wastes that do not contain nickel and from a nonhazardous waste that does contain nickel. Under Option I, treatment would be required to achieve the treatment standards for the listed hazardous wastes; treatment would not be necessary to reduce the concentration of

cont.

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Comment Number: 51-Aiii-2

Docket Number: LD12-00187

Commenter: METAL CATALYSTS PRODUCERS (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT FOR OPTION 1, CONTINUED APPLICATION OF WASTE CODE CARRY-THROUGH

Comment:

the nickel. Under Option II, however, since nickel is a constituent of concern in the proposed BDAT treatment standards for multi-source leachate, the nickel would also have to be reduced to the extremely low level of 0.32 mg/l.

Thus, EPA should retain Option 1 as a treatment approach for multi-source leachate.

Comment Number: 51-Aiii-2

Docket Number: LD12-00187

Commenter: Metal Catalysts Producers

Issue: Options for Multi-Source Leachate

Subissue: Support for Option 1, Continued Application of Waste Code Carry-through

Response:

The commenter suggests that whether or not EPA adopts Option 2, it should continue Option 1. The Agency believes that it must choose one approach or the other. The only compromise allowing both options would be to establish a more sophisticated definition of single source leachate, as was done for leachate derived from listed dioxin wastes (F021-F023 and F025-F028; leachate derived from one or more of these listed wastes, but not containing any other hazardous waste, is considered single source leachate.) There is neither time nor resources to make such determinations for all the waste codes that could be found in leachate (nor time for public notice) within the time constraints of promulgating the Third Third final rule.

The Agency is not adopting the waste code carry-through option for regulation of multi-source leachate. The waste code carry-through option would complicate determinations of which standards apply to multi-source leachates where multiple standards exist for the same constituent or where constituents are derived from both hazardous and nonhazardous wastes, as discussed by the commenter. Additionally, the Agency believes that the waste code carry-through option would be harder to implement and enforce than an option based on a separate multi-source leachate standard.

Comment Number: 51-Aiii-3

Docket Number: LD12-L0006

Commenter: GREAT LAKES CHEMICAL CORPORATION

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT FOR OPTION 1, CONTINUED APPLICATION OF WASTE CODE CARRY-THROUGH

Comment:

III.A.7.b.(1) and (2) (pp. 48462-48463)

GLCC supports the continued application of only those treatment standards for the waste codes that were land disposed for multi-source leachate as described in III.A.7.1.(a) versus III.A.7.b.(2).

Again, the establishment of constituent concentration for multi-source leachate may be practical for a commercial facility, but discriminatory against a facility that handles only waste codes from a specific treatability group.

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Comment Number: 51-Aiii-3

Docket Number: LD12-L0006

Commenter: Great Lakes Chemical Corporation

Issue: Options for Multi-Source Leachate

Subissue: Support for Option 1, Continued Application of Waste Code Carry-through

Response:

The Agency is not adopting the waste code carry-through option for regulation of multi-source leachate. The waste code carry-through option would complicate determinations of which standards apply to multi-source leachates where multiple standards exist for the same constituent. Additionally, the Agency believes that the waste code carry-through option would be harder to implement and enforce than an option based on a separate multi-source leachate standard.

Commenters supporting the waste code carry-through option were concerned that facilities generating or treating multi-source leachates derived from a limited number of waste codes would be subject to unnecessary analysis requirements. Using the separate multi-source leachate standards option need not overly burden facilities in this category. Under the promulgated approach, the permit writer will have maximum flexibility to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

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Comment Number: 51-A111-4

Docket Number: -D12-00129

Commenter: OLIN CHEMICALS

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT FOR OPTION 1, CONTINUED APPLICATION OF WASTE CODE CARRY-THROUGH

Comment:

Development of Treatment Standards for Multi-Source Leachate (III.A.7.)

Olin commends USEPA on the approach it has taken on Multi-Source Leachate in seeking the regulated communities comments (preference) on this particular issue.

Olin understands that a major land disposal facility (such as a commercial landfill) would prefer the constituent list versus having to meet all the BDAT's (both concentration and technology) for its waste codes. Olin, which will primarily be dealing with groundwater from multi-source leachate, on the other hand will only be concerned with several waste codes (treatability groups) and would therefore prefer to meet the BDAT for those standards rather than test for 230 different constituents; most of which cannot possibly be present.

cont.

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Comment Number: 51-Aiii-4

Docket Number: LD12-00129

Commenter: OLIN CHEMICALS (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT FOR OPTION 1, CONTINUED APPLICATION OF WASTE CODE CARRY-THROUGH

Comment:

Olin proposes two possible alternatives based on the USEPA proposal to solve the above dilemma:

(1) Specify testing for only those waste codes and constituents that are potentially present. This can be a condition of the Part B operating permit or the Post-Closure Permit (whichever is applicable) and will be subject to permit negotiations between the Agency and the permittee. This will minimize the time and expense of unnecessary testing. In the case of groundwater, the Agency could require a one-time testing for constituents either for the Part 261 Appendix VIII list or the Part 264 Appendix IX list or the new Part 268 Multi-Source leachate list, or

(2) Allow each regulated facility to select on a one-time basis to either meet the concentration list standard or the BDAT for their waste codes in the leachate. This would penalize neither of the regulated communities and is site specific. The one-time selection can be a permit condition (Part B or Post-Closure) or in certified letter to the Agency.

Olin believes that these alternatives, which are just subsets of the Agencies approach, offer greater flexibility for treating of multi-source leachate and meet the USEPA's intentions towards this particular waste.

Comment Number: 51-Aiii-4

Docket Number: LD12-00129

Commenter: Olin Chemicals

Issue: Options for Multi-Source Leachate

Subissue: Support for Option 1, Continued Application of Waste Code Carry-through

Response:

The Agency is not adopting the waste code carry-through option for regulation of multi-source leachate. The waste code carry-through option would complicate determinations of which standards apply to multi-source leachates where multiple standards exist for the same constituent. Additionally, the Agency believes that the waste code carry-through option would be harder to implement and enforce than an option based on a separate multi-source leachate standard.

Commenters supporting the waste code carry-through option were concerned that facilities generating or treating multi-source leachates derived from a limited number of waste codes would be subject to unnecessary analysis requirements. Using the separate multi-source leachate standards option need not overly burden facilities in this category. Under the promulgated approach, the permit writer will have maximum flexibility to determine the subset of constituents that are likely to be present in the multi-source leachate. The permit writer may specify this subset for the initial analysis, however, in the absence of such a specification the analysis must include all BDAT List constituents. The permit writer may also specify subsequent sampling and analysis requirements in the facility's waste analysis plan (in the absence of such a specification, the entire BDAT List must be analyzed). This approach is similar to that used in permitting under the NPDES program, whereby permit writers do an initial analysis that may include the entire priority pollutant list, and subsequently monitor for a subset designated by permit that are likely to be present.

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Comment Number: 51- A iv -1

Docket Number: LD12-00088

Commenter: INCO UNITED STATES, INC., INCO LTD., AND THE INTERNATIONAL METALS RECLAMATION COMPANY, INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

First, we appreciate the fact that EPA has now proposed two alternatives for establishing treatment standards for multi-source leachate. Rather than adopting only one of these alternatives, however, EPA should promulgate both alternatives under Section 3004(m)(1) of RCRA and should give facility owners and operators the option of complying with either of the two alternatives before land disposing of multi-source leachate.

I. EPA Should Adopt Both of Its Proposed Options as Alternative Treatment Standards for Multi-Source Leachate.

In the rulemaking notice, EPA has proposed two options as the BDAT treatment standards for multi-source leachate. Under the first option, multi-source leachate would have to meet all of the treatment standards for the hazardous wastes from which the leachate was derived. Under the second option, EPA would prescribe "one fixed set of wastewater treatment standards and one set of nonwastewater treatment standards for all multi-source leachate and treatment residues."1/ As EPA recognizes, under either option, "the number of applicable concentration-based constituent standards could be very large (i.e., there could be more than 200 individual constituent standards that would have to be met)."2/

cont.

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Comment Number: 51- Aiv - 1

Docket Number: LD12 - 00088 (continued)

Commenter: INCO UNITED STATES, INC., INDO LTD., AND THE INTERNATIONAL METALS RECLAMATION COMPANY, INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

Both options have drawbacks. As EPA points out, under the first option:

> "Administrative complications can arise from applying [waste treatment] standards based on the vast number of potentially applicable treatment standards and the various combinations and permutations of applicable treatment standards. This is further complicated if more than one standard exists for a particular constituent, since the most stringent standard then applies."3/

The second option avoids these problems, but at a considerable cost, since it requires multi-source leachate to meet concentration-based limits for more than 200 BDAT constituents. As EPA observes, while "this option may ease the burden of compliance for those facilities land disposing numerous waste codes, it may increase the burden for those facilities land disposing only a few waste codes, who, under this second option, would have to analyze for the entire BDAT list of constituents."4/

1/ 54 Fed. Reg. at 48462/3.

2/ Id.

3/ 54 Fed. Reg. at 48463/1.

Cont.

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Comment Number: 51-A iv-1

Docket Number: LD12-00088 (Continued)

Commenter: INDO UNITED STATES, INC., INDO LTD., AND THE INTERNATIONAL METALS RECLAMATION COMPANY, INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

There is no reason why EPA must adopt only one of these options. Instead, the Agency should adopt both of the proposed options as alternative treatment standards for multi-source leachate and should allow each individual facility to elect to comply with either one of them. The setting of alternative treatment standards for multi-source leachate would be consistent with the approach that EPA has proposed for a variety of other prohibited wastes.5/ It should be adopted for multi-source leachate as well.

4/ 54 Fed. Reg. at 48463/3.

5/ See, e.g., 54 Fed. Reg. at 48447 (identifying thermal recovery or stabilization as a method of treatment for P119 and P120 nonwastewaters); id. at 48404 (identifying wet air oxidation; chemical oxidation; biodegradation; or incineration as a method of treatment for P017 wastewaters); id. at 48422 (identifying incineration of vented ignitable gases; or recovery as a method of treatment for D001 ignitable compressed gases).

Comment Number: 51-Aiv-1

Docket Number: LD12-00088

Commenter: Inco United States, Inc., Indo Ltd., and The International Metals Reclamation Company, Inc.

Issue: Options for Multi-Source Leachate

Subissue: Support Promulgation of Both Options

Response:

The Agency does not support promulgation of both multi-source leachate options (i.e., both treatment standards based on continued application of the waste code carry-through and separate treatment standards for multi-source leachate). Promulgating both options would severely complicate the application of the treatment standards by establishing inequality in standards from one facility to the next. Additionally, EPA believes the either/or approach urged by the commenter creates extremely difficult enforcement problems. Successful enforcement requires a scheme whereby a prohibited waste is subject to a single treatment standard, not a choice. The more complicated scheme urged here is, in the Agency's view, too complicated and resource intensive to warrant adoption.

The promulgation of both options would not be similar to cases where the Agency has set two or more methods of treatment as a treatment standard, as is suggested by the commenter. In cases where the Agency is promulgating two or more methods rather than a numerical standard, the Agency believes that the treatment technologies specified provide equal treatment of the waste. Both technologies are set as the treatment standard to provide more flexibility to hazardous waste generators and treaters. To promulgate two sets of numerical standards, however, for the same multi-source leachate constituent would result in a standard very difficult to implement or enforce.

The Agency believes that it must choose one option or the other. The only compromise allowing both options would be to establish a more sophisticated definition of single source leachate, as was done for leachate derived from listed dioxin wastes (F021-F023 and F025-F028; leachate derived from one or more of these listed wastes, but not containing any other hazardous waste, is considered single source leachate.) There is neither time nor resources to make such determinations for all the waste codes that could be found in leachate, nor time for public notice, within the time constraints of promulgating the Third Third final rule.

1/2

Comment Number: 51-Aiv-2

Docket Number: LD12-00135

Commenter: U.S. AIR FORCE PLANT #44

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

DEVELOPMENT OF TREATMENT STANDARDS FOR MULTI-SOURCE LEACHATE:

EPA is proposing to establish one set of wastewater treatment standards and one set of nonwastewater treatment standards for all multi-source leachate which would be generated from the land disposal of hazardous waste. This method of addressing the issue of multi-source leachate creates an enormous burden on industry and it is not justified based upon the convenience it may provide for a select few. Since treatment standards have simply been transferred from those already existing or proposed treatment standards, this direct transfer has resulted in a list containing over 200 chemical parameters which would require analyses in order to ascertain compliance with the land disposal restrictions. The agency should consider the following prior to finalizing this complex area of the land disposal restrictions:

1. The option two approach as proposed, is not fundamentally any different than the original option one concept which would have required that the leachate meet the applicable treatment standards and BDAT for each and every waste code that it is "derived-from". In effect, EPA has taken all of the treatment standard constituents associated with all restricted waste codes and has lumped them together to create a cumbersome and unmanageable single waste code for multi-source leachate.

cont,

2/2

Comment Number: 51-Aiv-2

Docket Number: LD12-00135

Commenter: U.S. AIR FORCE PLANT #44 (continued)

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

2. In some cases, and most certainly our case here at AFP 44, it would certainly be easier to manage this "derived-from" leachate under the requirements of option one as originally preferred and proposed by the agency. Thus, we would only analyze for the treatment standard constituents associated with the particular waste codes managed at this facility.

3. If portions of industry prefer an option two approach (i.e. those commenters who previously stated that they manage all waste codes), then we would suggest that EPA promulgate both methods as an alternate compliance approach. Thus, each particular facility could select the compliance method best suited to its particular circumstances.

Comment Number: 51-Aiv-2

Docket Number: LD12-00135

Commenter: U.S. Air Force Plant #44

Issue: Options for Multi-Source Leachate

Subissue: Support Promulgation of Both Options

Response:

The Agency does not agree with the commenter's statement that the promulgation of Option 2 (the establishment of one set of wastewater and one set of nonwastewater multi-source leachate treatment standards) creates an enormous burden on industry and is not justified. The commenter erroneously believes that all multi-source leachate treatment standards were simply transferred from existing treatment standards. It is true that most of the nonwastewater treatment standards were transferred from treatment standards for listed wastes. The Leachate Committee submitted data, however, that EPA used (if the data showed substantial treatment by a demonstrated, available technology) to establish treatment standards for a substantial number of constituents. Furthermore, the commenter erroneously believes that the number of constituents that are regulated in multi-source leachate result from this transfer of all restricted waste codes. This is not the case, as is made obvious by the number of treatment standards that were established based upon data submitted by the Leachate Committee. As is explained in the preamble, the large number of constituents is a result of the fact that multi-source leachate derives potentially from any and all of the listed hazardous wastes. The treatment standand must, therefore, account for this possibility and include all BDAT List constituents.

The commenter is opposed to establishing separate multi-source leachate standards primarily because the facility will be required to analyze for all BDAT List constituents, when only a subset are likely to be present in the leachate. Under the promulgated approach, the facility's permit writer will have the flexibility of determining which BDAT List constituents should be analyzed initially, as well as which constituents require subsequent analysis and at what frequency. This subset of constituents will be specified in the facility's waste analysis plan. (See section 51-Fi and 51-Fii of this document for responses to additional comments on the issue of permit modifications and waste analysis plans.)

The Agency does not support promulgation of both multi-source leachate options (i.e., both waste code carry-through treatment standards and separate multi-source leachate treatment standards). Promulgating both options would severely complicate the application and enforcement of these standards. Additionally, it would establish inequality in standards from one facility to the next.

The Agency believes, therefore, that it must choose one option or the other. The only compromise allowing both options would be to establish a more sophisticated definition of single source leachate, as was done for leachate derived from listed dioxin wastes (F021-F023 and F025-F028; leachate derived from one or more of these listed wastes, but not containing any other hazardous waste, is considered single source leachate.) There is neither time nor resources to make such determinations for all the waste codes that could be found in leachate (nor time for public notice) within the time constraints of promulgating the Third Third final rule.

Comment Number: 51-A iv-3

Docket Number: LD12-0013B

Commenter: OCCIDENTAL CHEMICAL CORPORATION

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

B. OxyChem Favors Retaining Both BDAT Options in the Final Rule.

EPA has proposed two options for applying BDAT standards to multi-source leachate. (54 Fed. Reg. 48462) Under Option 1, EPA would continue to apply to the leachate the BDAT standards applicable to the wastes from which the leachate derived. Option 2 would establish two sets of BDAT standards, one for wastewater leachate and one for non-wastewater leachate, which would apply to all multi-source leachates and their residues. OxyChem supports retaining both options as part of the final rule.

Generators, such as OxyChem, should have the option of meeting single waste code standards for multi-source leachates carrying only a few waste codes. This would reduce the number of constituents to be considered, and allow the use of more waste-specific standards where practical. When this is not feasible, the Option 2 BDAT standards would apply.

Comment Number: 51-Aiv-3

Docket Number: LD12-00138

Commenter: Occidental Chemical Corporation

Issue: Options

Subissue: Support Promulgation of Both Options

Response:

The commenter suggests that facilities should have the option of first meeting the treatment standard for the originating waste code; however, if this option is not feasible, the multi-source leachate treatment standards could then be met. This suggestion merely compounds problems by engrafting an unrelated option (i.e., leachate-specific treatment standards) on top of the waste code carry-through difficulties.

The Agency does not support promulgation of both multi-source leachate standard options (i.e., both waste code carry-through standards and separate multi-source leachate standards). Promulgating both options would severely complicate the application and enforcement of these standards because it would be extremely difficult to know what the treatment standard was for each constituent. Additionally, it could establish inequality in treatment standards at the facility, as well as from one facility to the next.

The commenter is opposed to establishing separate multi-source leachate standards primarily because the facility will be required to analyze for all BDAT List constituents, when only a subset are likely to be present in the leachate. Under the promulgated approach, the facility's permit writer will have the flexibility of determining which BDAT List constituents should be analyzed initially, as well as which constituents require subsequent analysis and at what frequency. This subset of constituents will be specified in the facility's waste analysis plan. (See section 51-Fi and 51-Fii of this document for responses to additional comments on the issue of permit modifications and waste analysis plans.)

Comment Number: 51-AIV-4

Docket Number: LD12-00167

Commenter: WESTINGHOUSE ELECTRIC CORPORATION

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

PROPOSED TREATMENT STANDARDS FOR MULTI-SOURCE LEACHATE - (54 FR 48462)

EPA presents two options for the application of BDAT treatment standards for multi-source leachate and residues from leachate treatment: 1) continued application of those treatment standards for the waste codes that were land disposed; or 2) application of one set of wastewater treatment standards and one set of nonwastewater treatment standards for all multi-source leachate and treatment residues. Westinghouse supports both options to a limited extent, and suggests that EPA avail either option to generators. However, as previously discussed, treatment levels should not be established beyond the elimination of the hazardous characteristic. Furthermore, specifying treatment methods instead of treatment levels for multi-source leachate may not be universally appropriate. Specifying treatment methods for individual waste codes where multiple wastes are present could potentially result in conflicting methods of treatment being required.

Having both options appears to be appropriate for at least two circumstances. Option 1 is most appropriate for leachate that has a small number of associated waste codes. Option 2 is most appropriate for leachate with large numbers of waste codes. Thus, it is suggested that either option be available. This would prevent unnecessary testing of leachate that has a limited number of known or suspected waste codes.

Comment Number: 51-Aiv-4

Docket Number: LD12-00167

Commenter: Westinghouse Electric Corporation

Issue: Options for Multi-Source Leachate

Subissue: Support Promulgation of Both Options

Response:

The Agency does not support promulgation of both multi-source leachate standard options, thus allowing application of either the treatment standards based on the waste code carry-through or the application of the separate multi-source leachate treatment standards. Promulgating both options would severely complicate the application and enforcement of all multi-source leachate standards.

The commenter suggests both options are necessary in that each is appropriate for different types of facilities (i.e., waste code carry-through approach for small facilities with limited wastes, multi-source leachate standards for large facilities accepting large numbers of waste codes). Under the promulgated approach, however, the facility's permit writer will have the flexibility of determining which BDAT List constituents should be analyzed initially, as well as which constituents require subsequent analysis and at what frequency. This subset of constituents will be specified in the facility's waste analysis plan. (See section 51-Fi and 51-Fii of this document for responses to additional comments on the issue of permit modifications.)

The commenter raises the issue of treatment standards for multi-source leachate containing characteristic wastes by his assertion that treatment levels not be established beyond the elimination of the hazardous characteristic. The Agency is promulgating multi-source leachate treatment standards for all constituents on the BDAT list, therefore, all of the constituents that define a waste as hazardous based on exhibiting a characteristic will be addressed. This is consistent with the Agency's resolution of situations where prohibited listed wastes also exhibit a characteristic: the specific treatment standard for the listed waste controls because it is more specific. In the case of multi-source leachate, the promulgated treatment standard addresses any constituent that could cause the waste to exhibit a characteristic. Should multi-source leachate or its treatment residues exhibit a characteristic at the point of disposal, however, it must be treated to meet the treatment standard for that characteristic. If leachate simply exhibits a characteristic of hazardous waste, it is only subject to the treatment standard for that characteristic waste.

The commenter raises another issue that creates further problems when the waste code carry-through is applied to multi-source leachate, that of carrying through specified methods as the treatment standard for listed wastes. Under the waste code carry-through, required methods would carry-through to multi-source leachate, just as would concentration-based treatment standards. The Agency does not believe that a method of treatment should be set as the treatment standard for a constituent in multi-source leachate. Due to the highly variable nature of multi-source leachate, specification of a method of treatment would severely limit TSD facilities and might not be appropriate in all cases. Instead, the Agency is promulgating one set of numerical wastewater and nonwastewater treatment standards for multi-source leachate. When the Agency sets numerical standards, a treater is not precluded from using any treatment technology, so long as the technology does not involve impermissible dilution or land disposal.

Comment Number: 51-Aiv-5

Docket Number: LD12-00190

Commenter: UNION CARBIDE CHEMICALS AND PLASTICS COMPANY, INC.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

UCC supports retaining both multi-source BDAT options (the BDAT standard for the particular waste code and the BDAT standards for wastewater and non-wastewater multi-source leachates).

Comment Number: 51-Aiv-5

Docket Number: LD12-00190

Commenter: Union Carbide Chemicals and Plastics Company, Inc.

Issue: Options for Multi-Source Leachate

Subissue: Support Promulgation of Both Options

Response:

The Agency does not support promulgation of both multi-source leachate standard options (i.e., both waste code carry-through standards and separate multi-source leachate standards). Promulgating both options would severely complicate the application and enforcement of these standards. Additionally, it would establish inequality in standards from one facility to the next.

The Agency believes that it must choose one option or the other. The only compromise allowing both options would be to establish a more sophisticated definition of single source leachate, as was done for leachate derived from listed dioxin wastes (F021-F023 and F025-F028; leachate derived from one or more of these listed wastes, but not containing any other hazardous waste, is considered single source leachate.) There is neither time nor resources to make such determinations for all the waste codes that could be found in leachate (nor time for public notice) within the time constraints of promulgating the Third Third final rule.

Comment Number: 51-Aiv-6

Docket Number: LD12-00198

Commenter: DEPARTMENT OF ENERGY

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

13) **54 FR 48461, Multisource Leachate Treatment Standards.**

The EPA is proposing two options for the development of treatment standards for multisource leachate. The first option would continue the application of the carry-through principle under which multisource leachate must meet the standards established for all waste codes from which it was derived. The second option would establish one set of treatment standards for wastewater and nonwastewater multisource leachate. First, DOE recommends that both options be available to generators. The options appear to be appropriate for two circumstances. Option 1 is most appropriate for leachate that has only a small number of waste codes associated with it. Option 2 is most appropriate for leachate with a large number of waste codes. Having both options available to generators would lead to lower testing costs, as it would alleviate unnecessary testing for leachate that has only a limited number of waste codes associated with it.

Comment Number: 51-Aiv-6

Docket Number: LD12-00198

Commenter: Department of Energy

Issue: Options for Multi-Source Leachate

Subissue: Support Promulgation of Both Options

Response:

The Agency does not support promulgation of both multi-source leachate standard options, thus allowing application of either the treatment standards based on the waste code carry-through or the application of the separate multi-source leachate treatment standards. Promulgating both options would severely complicate the application and enforcement of all multi-source leachate standards.

The commenter suggests both options are necessary in that each is appropriate for different types of facilities (i.e., waste code carry-through approach for small facilities with limited wastes, multi-source leachate standards for large facilities accepting large numbers of waste codes). Under the promulgated approach, however, the facility's permit writer will have the flexibility of determining which BDAT List constituents should be analyzed initially, as well as which constituents require subsequent analysis and at what frequency. This subset of constituents will be specified in the facility's waste analysis plan. (See section 51-Fi and 51-Fii of this document for responses to additional comments on the issue of permit modifications.)

Comment Number: 51-Aiv-7

Docket Number: LD12-00253

Commenter: STATE OF NEW JERSEY, DEPT. OF ENVIRONMENTAL PROTECTION.

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

The Department encourages EPA's exploration of a variety of methods to classify, handle and treat multi-source leachate as outlined in pages 48461 through 48469. EPA presents various options and asks for comments and supporting data to aid in establishing the single, most equitable standard to apply to all multi-source leachate. The Department cannot provide the solicited technical data, but we would like to provide comment on EPA's proposals.

We get the sense that options one and two would serve the interests of separate groups of the regulated community. Option one, continued application of only those treatment standards for the waste codes that were land disposed seems favorable for generators and smaller TSDFs; typically on-site facilities, since the analytical requirements will be restricted to a few known wastes. The Department is puzzled, however, by EPA's proposal to adopt single treatment standards based on technology for these wastes. Has EPA really resolved that "for leachate wastewaters, any treatment standard that is a method should apply"? (pg. 48463, paragraph 3). Considering the variety of methods that EPA is specifying as BDAT for listed wastes, this option seems extremely open-ended. Perhaps EPA meant to specify that any treatment standard that is an appropriate method should apply. However, this specification would still be highly subjective, and open to misapplication.

EPA's proposal to specify incineration to destroy organics and stabilization for inorganics in leachate non-wastewaters is more appropriate, but still fairly generic.

The second option; establishing one set of wastewater standards and non-wastewater standards for multi-source leachate and treatment residues should ease the burden for large facilities treating and land disposing numerous waste codes. It should also increase the burden for generators and those smaller facilities favored by option one, by requiring analysis and treatment for all BDAT constituents. By proposing treatment standards which regulate all BDAT constituents, EPA is allowing for the application of any technology or combination of technologies which is capable of achieving the specified level of treatment. Since this is the case with constituent-based BDAT for listed wastes, it seems an achievable approach, and should also work in the favor of those large TSDFs who employ a wide arsenal of technologies.

Comment Number: 51-Aiv-7

Docket Number: LD12-00253

Commenter: State of New Jersey, Dept. of Environmental Protection

Issue: Options for Multi-Source Leachate

Subissue: Support Promulgation of Both Options

Response:

The Agency does not agree that Options 1 and 2 likely serve the interests of two different groups within the regulated community. There is some merit to the assertion that Option 1, if it had been adopted in the final rule, would have been easier to implement at smaller facilities where multi-source leachate is derived from a few known wastes, rather than at larger facilities treating and disposing numerous waste codes. The Agency believes, however, that Option 2 is better for both small and large facilities since permit writers will have the flexibility of determining which BDAT List constituents should be analyzed and at what frequency in the facility's waste analysis plan. By limiting the analyses requirements in the waste analysis plan, Option 2 imposes no extraordinary burden on small facilities. (See section 51-Fi and 51-Fii of this document for responses to additional comments on the issue of permit modifications.)

The commenter raises another of the primary problems with applying the waste code carry-through principle to multi-source leachate, that of carrying through treatment standards expressed as required methods of treatment. Under the proposed Option 1, the Agency's tentative resolution of which treatment method should apply when more than one waste code carried through to a particular wastewater multi-source leachate constituent (for which methods of treatment were specified as the standard) was that any method should apply (that is, any wastewater method that has been promulgated for any listed waste containing the particular constituent of concern). This was an equitable resolution of the method carry-through problem for wastewaters because, as the preamble explained, "all of the specified treatment methods for wastewaters ... are readily applicable wastewater treatment methods to which leachate wastewaters should be amenable" (54 FR 46463). The problem of which nonwastewater treatment method would carry-through to a constituent in multi-source leachate was more difficult to resolve. The preamble stated that there were no difficulties in applying incineration to organic constituents in multi-source leachate, and chemical stabilization to inorganics, EPA noted some of the complexities in carrying through treaatment methods to nonwastewaters, such as the potential carry-through of the "deactivation" treatment standard or of the proposed required methods for the high mercury or high lead subcategories. The Agency, in adopting Option 2 in the final rule, has avoided these potential carry-through problems by establishing a separate set of wastewater and nonwastewater treatment standards for multi-source leachate. When the Agency sets numerical standards, a treater is not precluded from using any treatment technology, so long as the technology does not involve impermissible dilution or land disposal.

Comment Number: 51-Aiv-8

Docket Number: LD12-00253

Commenter: STATE OF NEW JERSEY, DEPT. OF ENVIRONMENTAL PROTECTION

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

If EPA does not adopt a single waste code, the Agency should consider codifying both options one and two, since they are each suited to distinct members of the regulated community whose needs must be addressed. They can co-exist, and EPA must, when ever possible, allow flexibility in the application of the LDRs.

Comment Number: 51-Aiv-8

Docket Number: LD12-00253

Commenter: State of New Jersey, Dept. of Environmental Protection

Issue: Options for Multi-Source Leachate

Subissue: Support Promulgation of Both Options

Response:

The Agency does not agree that Options 1 and 2 each serve the interests of distinct members of the regulated community. The Agency believes that Option 2 is better for all members of the regulated community, especially since permit writers will have the flexibility of determining which BDAT List constituents should be analyzed and at what frequency in the facility's waste analysis plan. By limiting the analytical requirements in the waste analysis plan, Option 2 imposes no extraordinary analytical burden on facilities treating leachate derived from a few known waste codes. (See section 51-Fi and 51-Fii of this document for responses to additional comments on the issue of permit modifications.)

The Agency, in adopting Option 2 in the final rule, has avoided potential carry-through problems (particularly when the treatment standard for the listed waste is expressed as one or more methods of treatment) by establishing a separate set of numerical wastewater and nonwastewater treatment standards for multi-source leachate. When the Agency sets numerical standards, a treater is not precluded from using any treatment technology, so long as the technology does not involve impermissible dilution or land disposal.

The Agency believes, therefore, that the adoption of Option 2 provides flexibility in the specification of which constituents to analyze and the frequency of monitoring. Option 2 also provides flexibility in the choice of treatment technologies used to meet the promulgated treatment standards. The Agency does not believe that promulgating both Options 1 and 2 would provide more flexibility, but would instead limit the flexibility in that such an action would create many more implementation problems for the facility.

Comment Number: 51-A iv-9

Docket Number: LD 12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION

Issue: OPTIONS FOR MULTI-SOURCE LEACHATE

Subissue: SUPPORT PROMULGATION OF BOTH OPTIONS

Comment:

B. CMA Favors Retaining Both BDAT Options in the Final Rule.

EPA has proposed two options for applying BDAT standards to multi-source leachate. 54 Fed. Reg. at 48,462. Under Option 1, EPA will continue to apply to the leachate the BDAT standards applicable to all the wastes from which the leachate derived. Option 2 will establish two sets of BDAT standards, one for wastewater leachate and one for nonwastewater leachate and leachate treatment residues. CMA supports retaining both options as part of the final rule.

Generators should have the option of meeting single waste code standards for multi-source leachates carrying only a few waste codes. This will reduce the number of constituents to be considered, and allow the use of more waste-specific standards where practical. When this is not feasible or practical, the Option 2 BDAT standards will apply.

In addition, while CMA does not believe that the concept of treatability groups should be used to define multi-source leachate, we do believe that the concept has merit in the context of the constituents that generators must analyze.

Comment Number: 51-Aiv-9

Docket Number: LD12-L0007

Commenter: The Chemical Manufacturers Association

Issue: Options for Multi-Source Leachate

Subissue: Support Promulgation of Both Options

Response:

The commenter suggests that facilities should have the option of first meeting the treatment standard for the originating waste code; however, if this option is not feasible or practical, the multi-source leachate treatment standards could then be met. This suggestion merely compounds problems by engrafting an unrelated option (i.e., leachate-specific treatment standards) on top of the existing waste code carry-through difficulties.

The Agency does not support promulgation of both multi-source leachate standard options (i.e., both waste code carry-through standards and separate multi-source leachate standards). Promulgating both options would severely complicate the application and enforcement of these standards because it would be extremely difficult to know what the treatment standard was for each constituent. Additionally, it could establish inequality in treatment standards at the facility, as well as from one facility to the next.

Those opposed to establishing separate multi-source leachate standards are concerned that generators of multi-source leachate containing a few known originating waste codes will be forced to analyze for all BDAT List constituents, when only a subset are likely to be present in the leachate. The commenter acknowledges this problem by stating that the concept of treatability groups has merit in the context of the constituents that generators must analyze. The Agency does not agree that this problem is best addressed by establishing treatability groups for the purpose of analytical monitoring, and has instead provided case-by-case monitoring flexibility by allowing permit writers to determine which BDAT List constituents should be analyzed and at what frequency. This subset of constituents would then be specified in the facility's waste analysis plan. After the required initial analysis of the entire list of multi-source leachate constituents, only those constiutents designated in the waste analysis plan would be analyzed according to the schedule required by the permit writer.

Comment Number: 51-Bi-1

Docket Number: LD12-00113

Commenter: MICHIGAN DISPOSAL, INC.

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE WASTE CODE

Comment:

TREATABILITY GROUPS

It has been proposed that the definition of multi-source leachate would say that a multi-source leachate must be derived from more than one treatability group rather than more than one waste code. Such treatability groups would need to be clearly identified in the Federal Register for review and comment. This approach would be designed to significantly reduce the testing of leachate and lower leachate treatment costs. However, the reduced cost of testing and treatment by group would not provide sufficient financial incentive to justify costly land disposal segregation by group. Although this might simplify resource recovery (eg. metals) in the future, such segregation is not currently practiced nor is it economically feasible.

Comment Number: 51-Bi-1

Docket Number: LD12-00113

Commenter: Michigan Disposal, Inc.

Issue: Definition

Subissue: Support Definition Based on More Than One Waste Code

Response:

The Agency agrees with the commenter that in order to define multi-source leachate as leachate derived from more than one treatability group, all possible treatability groups would have to be classified and standardized in the Federal Register for review and public comment. The Agency lacks the time and resources necessary to establish and propose these treatability groups within the time constraints of promulgating the Third Third final rule, therefore, EPA views this as a problem that precludes adopting this approach at this time.

EPA believes that the approach of establishing one set of BDAT constituents in all multi-source leachates will provide the most appropriate regulatory framework for these wastes. After an initial analysis of the multi-source leachate that may, at the descretion of the permit writer, include the entire BDAT List, the permit writer will have the flexibility to determine on a case-by-case basis which constituents in a multi-source leachate require subsequent analysis and monitoring. The permit writer can use constituents that were present in the initial waste analysis (as well as those constituents regulated in the originating waste codes) as a basis for selecting those constituents to monitor in the multi-source leachate. This will allow the permit writer to regulate multi-source leachate appropriately and without unnecessary analytical requirements (and corresponding costs). The Agency reiterates that it believes (and commenters support) the most appropriate definition of multi-source leachate is that of leachate derived from more than one waste code, and is promulgating this definition in the final rule. There is no need, therefore, to define multi-source leachate on the basis of treatability groups. Additionally, the Agency is not imposing any requirements to segregate constituents within multi-source leachate on the basis of treatability group (nor did it propose such requirements).

No comment number 51-Bi-2

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Comment Number: 51-Bi-3

Docket Number: LD12-00138

Commenter: OCCIDENTAL CHEMICAL CORPORATION

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE WASTE CODE

Comment:

A. Multi-Source Leachate Should Be Defined To Encompass More Than One Waste Rather Than More Than One Treatability Group.

In the First-Third rule (53 Fed. Reg. 31146), EPA stated that leachate derived from disposal of listed wastes is a hazardous waste based on the derived-from principle. The Agency also took the position that the BDAT standards for all the listed waste codes from which the leachate derived were applicable to the leachate. The regulated community challenged this position, noting that it might not be possible due to matrix interferences to treat the leachate to all of the BDAT levels for the listed wastes from which it derived, and that BDAT levels for the listed wastes might actually conflict. EPA agreed that such problems might exist and decided to revisit the issue of multi-source leachate.

In early 1989 (54 Fed. Reg. 8264), EPA defined multi-source leachate as leachate that is derived from the disposal of more than one listed hazardous waste. EPA has now requested comment on whether the definition of multi-source leachate should be revised to encompass leachate from more than one treatability group rather than leachate from more than one listed waste. (54 Fed. Reg. 48462) OxyChem does not believe that any revision to the current definition (as articulated by EPA in early 1989) of multi-source leachate is necessary at this time.

Comment Number: 51-Bi-3

Docket Number: LD12-00138

Commenter: Occidental Chemical Corporation

Issue: Definition

Subissue: Support Definition Based on More Than One Waste Code

Response:

Most of the commenters expressing an opinion on this issue supported the original definition of multi-source leachate which was "leachate derived from more than one waste code." The Agency concurs and believes that this original definition for multi-source leachate is clearer than a definition based on more than one treatability group. (There were many comments with which EPA concurs, noting that the concept of further treatability groups, however meritorious, was defined insufficiently to allow proper public comment.) In addition, use of the original definition will facilitate implementation of the multi-source leachate standards since under a narrower multi-source leachate definition (i.e., leachate derived from more than one treatability group) all possible treatability groups would have to be classified and standardized in the Third Third rule.

EPA believes that the approach of establishing one set of BDAT constituents in all multi-source leachates will provide the most appropriate regulatory framework for these wastes. After an initial analysis of the multi-source leachate that may, at the descretion of the permit writer, include the entire BDAT List, the permit writer will have the flexibility to determine on a case-by-case basis which constituents in a multi-source leachate require subsequent analysis and monitoring. The permit writer can use constituents that were present in the initial waste analysis (as well as those constituents regulated in the originating waste codes) as a basis for selecting those constituents to monitor in the multi-source leachate. This will allow the permit writer to regulate multi-source leachate appropriately and without unnecessary analytical requirements (and corresponding costs).

Comment Number: 51-Bi-4

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE WASTE CODE

Comment:

III.A.7.a.(1)
Multi-source leachate — definition

In Section III.A.7.a.(1) EPA requests comments on a restrictive definition for multi-source leachate. This restrictive interpretation would require multi-source leachate to be derived from more than one *treatability group*, rather than from disposal of more than one listed hazardous waste.

A. EPA should not define multi-source leachates by treatability groups, as these are not sufficiently well-defined and it is not demonstrated that leachate from a single treatability group would be any easier to treat than leachates from multiple waste codes.

The Agency's definitions of treatability groups are not a suitable basis for establishing multi-source leachate standards, especially since for many of the F and K listed wastes, the wastewater BDAT standards are based on incinerator scrubber water blowdown, which is not generated from the listed waste in the same manner as leachate and does not have the same treatability and characteristics. If the Agency wants to pursue this option, it should formally propose the treatability groups that it would use, showing which listed wastes fit into each group and which treatment standards would apply to each group. The regulated community needs to have the time to analyze the specific groups to determine if the proposed standards for the group are achievable. The present proposal is too vague with respect to the definitions of the groups (for example, in some cases the Agency refers to wastewaters and nonwastewaters as treatability groups; in other cases, they are referring to groups of listed wastes such as in the K048-K052 example given in the preamble) to allow definitive comments on their feasibility.

Comment Number: 51-Bi-4

Docket Number: LD12-00151

Commenter: Gulf Coast Waste Disposal Authority

Issue: Definition

Subissue: Support Definition Based on More Than One Waste Code

Response:

The commenter asserts that the proposed rule was too vague with respect to the definitions of treatability groups (e.g., wastewaters and nonwastewaters, groups of listed wastes such as K048-K052) to allow definitive comments on their feasibility. This may be a valid point; however, other commenters who were in favor of continued application of the waste code carry-through supported establishing separate treatment standards for multi-source leachate derived from waste treatability groups. The commenter suggests that EPA should formally propose the treatability groups that it would use in setting treatment standards for multi-source leachate in order for the regulated community to assess whether the standards were achievable. The Agency agrees with the commenter that in order to define multi-source leachate as leachate derived from more than one treatability group, all possible treatability groups would have to be classified and standardized in the Federal Register for review and public comment. The Agency, however, lacks the time and resources necessary to establish and propose such treatability groups within the time constraints of promulgating the Third Third final rule.

Most of the commenters expressing an opinion on this issue supported the original definition of multi-source leachate which was "leachate derived from more than one waste code." The Agency concurs, and believes that this original definition for multi-source leachate is clearer than a definition based on more than one treatability group.

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Comment Number: 51-Bi-5

Docket Number: LD12-00157

Commenter: ASSOCIATION OF STATE AND TERRITORIAL SOLID WASTE MANAGEMENT OFFICIALS

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE WASTE CODE

Comment:

It is our understanding, from the preamble, that the permit writer would have the discretion of specifying not only the frequency of analysis of such wastes, but the individual constituents as well. This being the case, it would not be necessary for USEPA to develop a narrower definition to deal with leachate derived exclusively from wastes within a single treatability group as suggested at 54 FR 48462. For example, if the leachate were only derived from wastes in the K048-052 series, the permit writer could specify only those related constituents in the permit, if he so chooses.

Comment Number: 51-Bi-5

Docket Number: LD12-00157

Commenter: Association of State and Territorial Solid Wastes Management Officials

Issue: Definition

Subissue: Support Definition Based on More Than One Waste Code

Response:

The Agency agrees with this commenter. EPA believes that the approach of establishing one set of BDAT constituents in all multi-source leachates will provide the most appropriate regulatory framework for these wastes. After an initial analysis of the multi-source leachate that may, at the descretion of the permit writer, include the entire BDAT List, the permit writer will have the flexibility to determine on a case-by-case basis which constituents in a multi-source leachate require subsequent analysis and monitoring. The permit writer can use constituents that were present in the initial waste analysis (as well as those constituents regulated in the originating waste codes) as a basis for selecting those constituents to monitor in the multi-source leachate. This will allow the permit writer to regulate multi-source leachate appropriately and without unnecessary analytical requirements.

Comment Number: 51-Bi-6

Docket Number: LD12- 00173

Commenter: CH2M HILL

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE WASTE CODE

Comment:

Definition of Multi-Source Leachate

EPA is also seeking comment on an approach under which leachate would have to be derived from more than one treatability group (rather than from more than one waste code) to be considered "multi-source." Such a definition would allow members of the regulated community who manage wastes from one treatability group to analyze only for the relevant BDAT compounds and to manage the leachate to meet the standards established for that treatability group. The Committee believes that all multi-source leachate should be characterized initially for the entire set of BDAT compounds. If the analysis indicates that the standards for a particular treatability group are appropriate, these standards could be applied at the discretion of the permit writer. In general, we believe EPA should adopt an approach that would give the permit writer discretion to assign (a) the appropriate treatment standards and (b) the constituents to be monitored, depending on the specific character of the multi-source leachate being addressed. This approach should provide an efficient and effective means for defining the appropriate constituents for treatment and monitoring.

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Comment Number: 51-Bi-6

Docket Number: LD12-00173

Commenter: CH2M Hill

Issue: Definition

Subissue: Support Definition Based on More Than One Waste Code

Response:

Most of the commenters expressing an opinion on this issue supported the original definition of multi-source leachate which was "leachate derived from more than one waste code." The Agency concurs and believes that this original definition for multi-source leachate is clearer than a definition based on more than one treatability group.

The Agency disagrees, however, with the commenter's assertion that the permit writer (and presumably the owner/operator of an interim status facility) should be given the discretion to assign the appropriate treatment standard for the constituents in multi-source leachate. The Agency is promulgating a single wastewater treatment standard and a separate nonwastewater treatment standard for multi-source leachate. The promulgated separate multi-source leachate standards will ease the burden of determining which standards apply to a leachate where different treatment standards have been promulgated for the same constituent present in two or more different hazardous waste codes. The application of one set of multi-source leachate standards will also be easier to implement and enforce and will still provide the same measure of environmental protection.

EPA believes that the approach of establishing one set of BDAT constituents in all multi-source leachates will provide the most appropriate regulatory framework for these wastes. After an initial analysis of the multi-source leachate that may, at the descretion of the permit writer, include the entire BDAT List, the permit writer will have the flexibility to determine on a case-by-case basis which constituents in a multi-source leachate require subsequent analysis and monitoring. This will allow the permit writer to regulate multi-source leachate appropriately and without unnecessary analytical requirements (and corresponding costs).

Comment Number: 51-Bi-7

Docket Number: LD12-00190

Commenter: UNION CARBIDE CHEMICALS AND PLASTICS COMPANY, INC.

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE WASTE CODE

Comment:

UCC supports the concept that multi-source leachate is derived from the disposal of more than one listed hazardous waste and not from more than one treatability group. While the concept of treatability groups is worth pursuing, more data is needed to develop this option.

Comment Number: 51-Bi-7

Docket Number: LD12-00190

Commenter: Union Carbide Chemicals and Plastics Company, Inc.

Issue: Definition

Subissue: Support Definition Based on More Than One Waste Code

Response:

Most of the commenters expressing an opinion on this issue supported the original definition of multi-source leachate which was "leachate derived from more than one waste code." The Agency concurs and believes that this original definition for multi-source leachate is clearer than a definition based on more than one treatability group. In addition, use of the original definition will facilitate implementation of the multi-source leachate standards since under a narrower multi-source leachate definition (i.e., leachate derived from more than one treatability group) all possible treatability groups would have to be classified and standardized in the Third Third rule. The Agency lacks the time and resources (including data) necessary to standardize and propose treatability groups within the time constraints of the Third Third final rule. EPA believes that the approach of establishing one set of BDAT constituents in all multi-source leachates will provide the most appropriate regulatory framework for these wastes.

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Comment Number: 51-Bi-8

Docket Number: LD12-00214

Commenter: BROWNING-FERRIS INDUSTRIES

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE WASTE CODE

Comment:

B. Definition of Multi-Source Leachate

With respect to the definition of multi-source leachate, EPA requests comment on the notion that the definition should be revised to cover only leachate from more than one "treatability group" rather than leachate from more than one listed waste. 54 Fed.Reg. 48462. The treatability group concept may have a great deal of merit, but the proposal does not provide nearly enough detail on what the specific treatability groups, and the underlying waste codes for each group, would be. We thus cannot determine from the proposal whether this concept, as envisioned by the Agency, is workable. Beyond that, we think it probably unwise at this late stage in the development of standards to inject more uncertainty and more, potentially arbitrary definitional distinctions into the process.

Comment Number: 51-Bi-8

Docket Number: LD12-00214

Commenter: Browning-Ferris Industries

Issue: Definition

Subissue: Support Definition Based on More Than One Waste Code

Response:

Most of the commenters expressing an opinion on this issue supported the original definition of multi-source leachate which was "leachate derived from more than one waste code." The Agency concurs and believes that this original definition for multi-source leachate is clearer than a definition based on more than one treatability group. (There were many comments with which EPA concurs, noting that the concept of further treatability groups, however meritorious, was defined insufficiently to allow proper public comment.) In addition, use of the original definition will facilitate implementation of the multi-source leachate standards since under a narrower multi-source leachate definition (i.e., leachate derived from more than one treatability group) all possible treatability groups would have to be classified, standardized, proposed, and finalized. The Agency lacks the time and resources (including data) necessary to accomplish such a task within the time constraints of the Third Third final rule.

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Comment Number: 51-Bi-9

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE WASTE CODE

Comment:

A. Multi-Source Leachate Should Be Defined To Encompass More Than One Waste Rather Than More Than One Treatability Group.

In the First-Third rule (53 Fed. Reg. 31,146 (Aug. 17, 1988)), EPA stated that leachate derived from disposal of listed wastes is a hazardous waste based on the derived-from principle. The Agency also took the position that the BDAT standards for all the listed waste codes from which the leachate derived were applicable to the leachate. The regulated community challenged this position, noting that it might not be possible, due to matrix interferences, to treat the leachate to all of the BDAT levels for the listed wastes from which it derived and that BDAT standards for the listed wastes might actually conflict. EPA agreed that such problems might exist and decided to revisit the issue of multi-source leachate.

In an earlier Federal Register notice on this subject (54 Fed Reg. 8,264 (Feb. 27, 1989)), EPA defined multi-source leachate as leachate that is derived from the disposal of more than one listed hazardous waste. EPA has now requested comment on whether the definition of multi-source leachate should be revised to encompass leachate from more than one treatability group rather than leachate from more than one listed waste. 54 Fed. Reg. at 48,462. We do not

Cont.

Comment Number: 51-Bi-9

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION (continued)

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE WASTE CODE

Comment:

believe that such a revision to the definition of multi-source leachate is appropriate at this time.

The concept of treatability groups has not been articulated clearly enough in this proposal to allow a judgment to be made as to whether such a concept would be acceptable in defining multi-source leachate. More information is needed on the specific groups, the underlying waste codes that would be included in each group, and the applicable treatment standards. Until this information is provided, it is impossible to determine whether EPA's proposal resolves the problem of conflicting standards that exists in the present regulatory system.

Accordingly, for the present rulemaking, the definition of multi-source leachate should encompass leachate derived from the disposal of more than one listed hazardous waste.

Comment Number: 51-Bi-9

Docket Number: LD12-L0007

Commenter: The Chemical Manufacturers Association

Issue: Definition

Subissue: Support Definition Based on More Than One Waste Code

Response:

Most of the commenters expressing an opinion on this issue supported the original definition of multi-source leachate which was "leachate derived from more than one waste code." The Agency concurs and believes that this original definition for multi-source leachate is clearer than a definition based on more than one treatability group. (There were many comments with which EPA concurs, noting that the concept of further treatability groups, however meritorious, was defined insufficiently to allow proper public comment.) In addition, use of the original definition will facilitate implementation of the multi-source leachate standards since under a narrower multi-source leachate definition (i.e., leachate derived from more than one treatability group) all possible treatability groups would have to be classified, standardized, proposed, and finalized. The Agency lacks the time and resources (including data) necessary to accomplish such a task within the time constraints of the Third Third final rule.

Comment Number: 51-Bii-1

Docket Number: LD12-00128.

Commenter: VULCAN MATERIALS COMPANY

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE TREATABILITY GROUP

Comment:

After review of the discussion on multi-source leachates, we concur with the EPA that the definition of multi-source leachates should be narrowed to indicate that the multi-source leachate must be derived from more than one treatability group, rather than from more than one waste code.

Comment Number: 51-Bii-1

Docket Number: LD12-00128

Commenter: Vulcan Materials Company

Issue: Definition

Subissue: Support Definition Based on More Than One Treatability Group

Response:

The Agency is not promulgating a more limited definition of multi-source leachate (i.e., multi-source leachate is leachate derived from more than one treatability group). (Something of an exception was made in the treatability group that has been established for F020-F023 and F026-F028 dioxin-containing wastes; this group, however, is considered to be a single source leachate.) The narrower multi-source leachate definition would require clarification and standardization of all possible treatability groups. The Agency does not have the time or resources available to clarify these issues within the time constraints of promulgating the Third Third rule, nor does EPA feel that this is the most appropriate regulatory approach at this time. Commenters supported EPA's final approach, stating that it is not necessary to use the treatability group concept to limit the amount and scope of analytical work necessary to demonstrate that multi-source leachate achieves the treatment standards.

The concern of commenters is that the multi-source leachate definition, based on more than one waste code rather than more than one treatability group, would require facilities with multi-source leachate resulting from wastes in the same treatability group to be subject to the treatment standards for the entire list of BDAT constituents rather than the standards applying to that treatability group. This concern is addressed by allowing permit writers (and owner/operators of interim status facilities) flexibility in determining analysis requirements on a case-by-case basis. It follows that if a facility's multi-source leachate is derived from wastes in a single treatability group, the permit writer can use his or her judgement and require routine monitoring of only those constituents expected to be present. Other commenters on this issue agreed that if the wastes disposed at a facility are few, it would not be a difficult exercise for the TSDF and the permit writer to specify the constituents for which analysis is required and frequency of subsequent monitoring.

Comment Number: 51-Bii-2

Docket Number: LD12-00143

Commenter: GENERAL MOTORS CORPORATION

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE TREATABILITY GROUP

Comment:

Multi-source Leachate

EPA has requested comment on whether the definition of "multi-source leachate" should be narrowed (page 48462), i.e., that a leachate would only be "multi-source" if it were derived from more than one treatability group, rather than more than one waste code. GM agrees that it would be inappropriate to subject the regulated community to standards encompassing virtually all toxic pollutants, as would be the case if "multi-source leachate" continues to be defined in the broader sense. We therefore support adoption of the narrower definition.

Comment Number: 51-Bii-2

Docket Number: LD12-00143

Commenter: General Motors Corporation

Issue: Definition

Subissue: Support Definition Based on More Than One Treatability Group

Response:

The Agency is not promulgating a more limited definition of multi-source leachate (i.e., multi-source leachate is leachate derived from more than one treatability group). (Something of an exception was made in the treatability group that has been established for F020-F023 and F026-F028 dioxin-containing wastes; this group, however, is considered to be a single source leachate.) The narrower multi-source leachate definition would require clarification and standardization of all possible treatability groups. The Agency does not have the time or resources available to clarify these issues within the time constraints of promulgating the Third Third rule, nor does EPA feel that this is the most appropriate regulatory approach at this time. Commenters supported EPA's final approach, stating that it is not necessary to use the treatability group concept to limit the amount and scope of analytical work necessary to demonstrate that multi-source leachate achieves the treatment standards.

The concern of commenters is that the multi-source leachate definition, based on more than one waste code rather than more than one treatability group, would require facilities with multi-source leachate resulting from wastes in the same treatability group to be subject to the treatment standards for the entire list of BDAT constituents rather than the standards applying to that treatability group. This concern is addressed by allowing permit writers (and owner/operators of interim status facilities) flexibility in determining analysis requirements on a case-by-case basis. It follows that if a facility's multi-source leachate is derived from wastes in a single treatability group, the permit writer can use his or her judgement and require routine monitoring of only those constituents expected to be present. Other commenters on this issue agreed that if the wastes disposed at a facility are few, it would not be a difficult exercise for the TSDF and the permit writer to specify the constituents for which analysis is required and frequency of subsequent monitoring.

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Comment Number: 51-Bii-3

Docket Number: LDR-00168

Commenter: AMERICAN PETROLEUM INSTITUTE (continued)

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE TREATABILITY GROUP

Comment:

However, API also urges EPA to consider leachate derived from one treatability group (e.g., K048-K052) to be considered single source rather than multi-source leachate. See part III.A.7.a. of these comments.[22] If EPA nonetheless considers leachate from a single treatability group to be multi-source rather than single source leachate, then API suggests that EPA establish separate waste codes for multi-source leachate from each treatability group, instead of one universal waste code for all multi-source leachates, for efficiency and information purposes. API is concerned that a single waste code for all multi-source leachates would be so generalized and all encompassing that it would provide no useful information to those who treat, store or dispose of such wastes.

[22] API also suggests that EPA adopt separate waste codes for "single source" leachate derived from one treatability group for the same reasons.

Comment Number: 51-Bii-3

Docket Number: LD12-00168

Commenter: American Petroleum Institute

Issue: Definition

Subissue: Support Definition Based on More Than One Treatability Group

Response:

The Agency is not promulgating a more limited definition of multi-source leachate (i.e., multi-source leachate is leachate derived from more than one treatability group). (Something of an exception was made in the treatability group that has been established for F020-F023 and F026-F028 dioxin-containing wastes; this group, however, is considered to be a single source leachate.) The narrower multi-source leachate definition would require clarification and standardization of all possible treatability groups. The Agency does not have the time or resources available to clarify these issues within the time constraints of promulgating the Third Third rule, nor does EPA feel that this is the most appropriate regulatory approach at this time. Commenters supported EPA's final approach, stating that it is not necessary to use the treatability group concept to limit the amount and scope of analytical work necessary to demonstrate that multi-source leachate achieves the treatment standards.

The concern of commenters is that the multi-source leachate definition, based on more than one waste code rather than more than one treatability group, would require facilities with multi-source leachate resulting from wastes in the same treatability group to be subject to the treatment standards for the entire list of BDAT constituents rather than the standards applying to that treatability group. This concern is addressed by allowing permit writers (and owner/operators of interim status facilities) flexibility in determining analysis requirements on a case-by-case basis. It follows that if a facility's multi-source leachate is derived from wastes in a single treatability group, the permit writer can use his or her judgement and require routine monitoring of only those constituents expected to be present. Other commenters on this issue agreed that if the wastes disposed at a facility are few, it would not be a difficult exercise for the TSDF and the permit writer to specify the constituents for which analysis is required and frequency of subsequent monitoring.

Comment Number: 51-Bii-4

Docket Number: LD12-00224

Commenter: TEXACO INC.

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE TREATABILITY GROUP

Comment:

II. Multi-Source Leachate

Multi-source leachate should be defined as leachate derived from more than one treatability group since the treatment standards should all be the same within a treatability group.

Comment Number: 51-Bii-4

Docket Number: LD12-00224

Commenter: Texaco Inc.

Issue: Definition

Subissue: **Support Definition Based on More Than One Treatability Group**

Response:

The Agency is not promulgating a more limited definition of multi-source leachate (i.e., multi-source leachate is leachate derived from more than one treatability group). (Something of an exception was made in the treatability group that has been established for F020-F023 and F026-F028 dioxin-containing wastes; this group, however, is considered to be a single source leachate.) The narrower multi-source leachate definition would require clarification and standardization of all possible treatability groups. The Agency does not have the time or resources available to clarify these issues within the time constraints of promulgating the Third Third rule, nor does EPA feel that this is the most appropriate regulatory approach at this time. Commenters supported EPA's final approach, stating that it is not necessary to use the treatability group concept to limit the amount and scope of analytical work necessary to demonstrate that multi-source leachate achieves the treatment standards.

The concern of commenters is that the multi-source leachate definition, based on more than one waste code rather than more than one treatability group, would require facilities with multi-source leachate resulting from wastes in the same treatability group to be subject to the treatment standards for the entire list of BDAT constituents rather than the standards applying to that treatability group. This concern is addressed by allowing permit writers (and owner/operators of interim status facilities) flexibility in determining analysis requirements on a case-by-case basis. It follows that if a facility's multi-source leachate is derived from wastes in a single treatability group, the permit writer can use his or her judgement and require routine monitoring of only those constituents expected to be present. Other commenters on this issue agreed that if the wastes disposed at a facility are few, it would not be a difficult exercise for the TSDF and the permit writer to specify the constituents for which analysis is required and frequency of subsequent monitoring.

Comment Number: 51-Bii-5

Docket Number: LD12- L0006

Commenter: GREAT LAKES CHEMICAL CORPORATION

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE TREATABILITY GROUP

Comment:

GLCC wishes, specifically, to comment on the following references:

III.A.7.a.1. (p. 48462)

GLCC concurs with EPA's position on narrowing the definition for multi-source leachate to that which the "leachate must be derived from more than one treatability group (rather than one waste code."

This is a practical approach specifically for GLCC's "brominated wastes." Leachates from this treatability group for those listed brominated wastes would have to undergo the same treatment and would have to attain the same concentration levels as proposed in Section III.A.2.e. It would be superfluous to list a leachate contaminated with methyl bromide (U029) and bromoform (U225), for example, as multi-source, because they are similar in both physical and chemical characteristics.

Not only is such an approach practical, but it also does not place an undue burden upon small facilities which might handle only certain wastes. Otherwise, these same facilities might be grouped with meeting the same requirements for management of multi-source leachate as commercial facilities that handle a variety of waste codes.

Comment Number: 51-Bii-5

Docket Number: LD12-L0006

Commenter: Great Lakes Chemical Corporation

Issue: Definition

Subissue: Support Definition Based on More Than One Treatability Group

Response:

The Agency is not promulgating a more limited definition of multi-source leachate (i.e., multi-source leachate is leachate derived from more than one treatability group). (Something of an exception was made in the treatability group that has been established for F020-F023 and F026-F028 dioxin-containing wastes; this group, however, is considered to be a single source leachate.) The narrower multi-source leachate definition would require clarification and standardization of all possible treatability groups. The Agency does not have the time or resources available to clarify these issues within the time constraints of promulgating the Third Third rule, nor does EPA feel that this is the most appropriate regulatory approach at this time. Commenters supported EPA's final approach, stating that it is not necessary to use the treatability group concept to limit the amount and scope of analytical work necessary to demonstrate that multi-source leachate achieves the treatment standards.

The concern of commenters is that the multi-source leachate definition, based on more than one waste code rather than more than one treatability group, would require facilities with multi-source leachate resulting from wastes in the same treatability group to be subject to the treatment standards for the entire list of BDAT constituents rather than the standards applying to that treatability group. This concern is addressed by allowing permit writers (and owner/operators of interim status facilities) flexibility in determining analysis requirements on a case-by-case basis. It follows that if a facility's multi-source leachate is derived from wastes in a single treatability group, the permit writer can use his or her judgement and require routine monitoring of only those constituents expected to be present. Other commenters on this issue agreed that if the wastes disposed at a facility are few, it would not be a difficult exercise for the TSDF and the permit writer to specify the constituents for which analysis is required and frequency of subsequent monitoring.

Comment Number: 51-Ci-1

Docket Number: LD12-00159

Commenter: WASTE MANAGEMENT INC., and CHEMICAL WASTE MANAGEMENT, INC.

Issue: DIOXIN

Subissue: SUPPORT FOR PROPOSED APPROACH

Comment:

C. EPA's Approach to Dioxins and Furans is Sound

We support, with one exception, EPA's well-reasoned and mature discussion concerning multi-source leachate that contains low levels of dioxins or furans. EPA waste codes F020-F023 and F025-28, which contain significant levels of those constituents, crystalized the flaw of the waste code carry-through principle as applied to leachate. With no technical basis or logic, the waste code carry-through principle commanded that these codes carry through to leachate if the landfill from which it was generated ever received any quantity of those waste codes, or their regulatory precursors. It mattered not that the leachate contained no (or extremely low) detectable levels of dioxin or that dioxin is ubiquitous in the environment. See Travis, Hathemer-Frey, Silbergeld, Dioxin, Dioxin Everywhere, 23 Environ. Sci. Technol. 1061 (1989). Under the waste code carry-through principle these facts meant nothing; the dioxin waste codes still clung to leachate.

In the preamble, EPA has recognized that the mere mention of the dioxin codes is the password to "extraordinary regulatory and nonregulatory burdens in the form of extra management standards . . ., permitting obstacles due to public perceptions, extra management costs, and prioritized land disposal prohibitions." 54 Fed. Reg. at 48,464-65. These consequences, EPA acknowledges, should not be driven by the

Comment Number: 51-Ci-1

Docket Number: LD12-00159

Commenter: WASTE MANAGEMENT, INC., and CHEMICAL WASTE MANAGEMENT, INC. (continued)

Issue: DIOXIN

Subissue: SUPPORT FOR PROPOSED APPROACH

Comment:

arbitrary assignment of a waste code but "should be reserved for situations where the concentrations of dioxin merit the need for extraordinary controls." Id. at 48,465. Put another way, subjecting multi-source leachate to these special management controls based only on a wooden application of the waste code carry-through principle is the environmental equivalent of "crying wolf."

The dioxin issue as it applies to multi-source leachate demands that EPA get to the bottom of the problem: EPA should not merely make an exception to the derived-from rule as it suggests, id. at 48,465, but it should finally conclude that leachate in fact is a unique and newly generated waste, deserving of its own code.

Comment Number: 51-Ci-1

Docket Number: LD12-00159

Commenter: Waste Management Inc., and Chemical Waste Management, Inc.

Issue: Dioxin

Subissue: Support for Proposed Approach

Response:

Commenters unanimously supported EPA's proposed approach for regulating dioxin- and furan-containing listed wastes in leachate. The Agency is promlugating an approach whereby multi-source leachate derived from any dioxin waste no longer must carry the acute hazardous dioxin waste codes F020-F023 and F025-F027. The Agency is taking such an action based on data showing that dioxins present in multi-source leachate were in very low (or nondetectable) concentrations. The low levels are below the level that the Agency believes warrants classification as an acute hazardous waste.

The commenters pointed to the regulation of dioxin and furans in leachate as an example of the problems associated with application of the waste code carry-through approach. Under the application of the waste code carry-through, if dioxin were found in leachate, no matter what waste was the source of the dioxin, the facility was forced to manage that leachate under the stringent management standards promulgated for acute hazardous listed wastes F020-F023 and F026-F027 due to the presumption that the dioxin was derived from these codes. The Agency agrees that the application of the waste code carry-through has created problems in the management of leachate containing dioxin and furans. The Agency, therefore, is establishing a separate waste code for multi-source leachate (F039) and is promulgating one set of treatment standards for multi-source leachate wastewaters and nonwastewaters. The Agency has also changed its classification of leachate derived exclusively from listed dioxin wastes.

Commenters generally supported EPA's classification of leachate that is derived from the exclusive management of the listed dioxin-containing wastes (F020-F023 and F026-F028) and no other listed hazardous waste, as single source leachate. The wastes covered by these waste codes are acute hazardous dioxin wastes (with the exception of F028) subject to special management standards as well as special and appropriate public and regulatory scrutiny. Most commenters agreed that this approach is appropriate because leachate derived from only these hazardous wastes is likely to contain concentrations of dioxin meriting the need for extraordinary controls and thus should be subject to the same management standards.

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Comment Number: 51-Ci-2

Docket Number: LD12-00173

Commenter: CH2M HILL

Issue: DIOXIN

Subissue: SUPPORT FOR PROPOSED APPROACH

Comment:

IV. THE ISSUE OF DIOXINS AND FURANS

In the original promulgation for multi-source leachate, the utilization of the waste code carry-through principle threatened to create a totally unmanageable situation with respect to dioxins and furans:

- It is accepted that dioxin can come from many sources, including household wastes, and that dioxin compounds typically form as a product of incomplete combustion; dioxin compounds have been found to exist in such common combustion devices as municipal waste incinerators, industrial boilers, tailpipes, and barbecue grills; it can be said, therefore, that dioxin is ubiquitous in the environment.

- If dioxin, from whatever source, were found in leachate, the facility would be forced to manage that leachate under the stringent management standards promulgated for the F020-F023 and F026-F027 wastes due to the presumption that the dioxin was derived from these codes.

The Agency's preamble discussion of the dioxin and furan issue shows a clear understanding of the potential seriousness of this issue and outlines a sensible and effective approach to managing it (see 54 Fed. Reg at 48464). Specifically, EPA has determined that:

- The new leachate characterization data contains two data points indicating detectable concentrations of dioxin, both of which were very low.

- These low levels are "below the level the Agency believes warrants the special concerns which prompted special management standards..."

- "Accordingly, EPA is proposing that the dioxin waste codes not apply to multi-source leachate," but "be reserved for situations where the concentrations of dioxin merit the need for extraordinary controls." Leachate derived from any or all of the listed dioxin-containing wastes will be classified as multi-source.

Cont.

2/3

Comment Number: 51-Ci-2

Docket Number: LD12-00173

Commenter: CH2M HILL (continued)

Issue: DIOXIN

Subissue: SUPPORT FOR PROPOSED APPROACH

Comment:

- Similarly, "incorporation of the special standards for acute hazardous wastes do not appear appropriate for multi-source leachate."

The Leachate Committee fully supports the Agency's analysis and its approach to regulating dioxins and furans in multi-source leachate.

3/3

Comment Number: 51-Ci-2

Docket Number: LD12-00173

Commenter: CH_2M HILL (continued)

Issue: DIOXIN

Subissue: SUPPORT FOR PROPOSED APPROACH

Comment:

- EPA is proposing that leachate derived exclusively from F020-F023 and F026-F027 dioxin-containing waste be defined as single source leachate. This definition is consistent with the general approach to dioxins and furans that the Committee strongly supports (see Section IV).

Comment Number: 51-Ci -2

Docket Number: LD12-00173

Commenter: CH2M Hill

Issue: Dioxin

Subissue: Support for Proposed Approach

Response:

Commenters unanimously supported EPA's proposed approach for regulating dioxin- and furan-containing listed wastes in leachate. The Agency is promlugating an approach whereby multi-source leachate derived from any dioxin waste no longer must carry the acute hazardous dioxin waste codes F020-F023 and F025-F027. The Agency is taking such an action based on data showing that dioxins present in multi-source leachate were in very low (or nondetectable) concentrations. The low levels are below the level that the Agency believes warrants classification as an acute hazardous waste.

The commenters pointed to the regulation of dioxin and furans in leachate as an example of the problems associated with application of the waste code carry-through approach. Under the application of the waste code carry-through, if dioxin were found in leachate, no matter what waste was the source of the dioxin, the facility was forced to manage that leachate under the stringent management standards promulgated for acute hazardous listed wastes F020-F023 and F026-F027 due to the presumption that the dioxin was derived from these codes. The Agency agrees that the application of the waste code carry-through has created problems in the management of leachate containing dioxin and furans. The Agency, therefore, is establishing a separate waste code for multi-source leachate (F039) and is promulgating one set of treatment standards for multi-source leachate wastewaters and nonwastewaters. The Agency has also changed its classification of leachate derived exclusively from listed dioxin wastes.

Commenters generally supported EPA's classification of leachate that is derived from the exclusive management of the listed dioxin-containing wastes (F020-F023 and F026-F028) and no other listed hazardous waste, as single source leachate. The wastes covered by these waste codes are acute hazardous dioxin wastes (with the exception of F028) subject to special management standards as well as special and appropriate public and regulatory scrutiny. Most commenters agreed that this approach is appropriate because leachate derived from only these hazardous wastes is likely to contain concentrations of dioxin meriting the need for extraordinary controls and thus should be subject to the same management standards.

Comment Number: 51 - Ci-3

Docket Number: LD12-00214

Commenter: BROWNING-FERRIS INDUSTRIES

Issue: DIOXIN

Subissue: SUPPORT FOR PROPOSED APPROACH

Comment:

E. Dioxin-Related Issues:

BFI supports the Agency's proposed approach on multi-source leachate "derived from" a dioxin waste. We believe the Agency is correct in concluding that these wastes do not warrant imposition of the especial standards accompanying dioxin wastes, nor should they be subject to the dioxin and furan waste codes. 54 Fed.Reg. 48464-65. With respect to the proposed treatment standard of 1 ppb for dioxins and furans, the Agency is also correct in noting that there may be "no need for a dioxin standard . . . if control of other constituents will also control the dioxins and furans." Id. at 48465. The issue of the use of indicator pollutants is, as the Agency notes, not unique to these constituents. BFI encourages the Agency to pursue the use of indicator pollutants in the standard setting process, and, as indicated, we believe this is an area where giving flexibility to the individual permit writer is appropriate.

Comment Number: 51-Ci- 3

Docket Number: LD12-00214

Commenter: Browning-Ferris Industries

Issue: Dioxin

Subissue: Support for Proposed Approach

Response:

Commenters unanimously supported EPA's proposed approach for regulating dioxin- and furan-containing listed wastes in leachate. The Agency is promlugating an approach whereby multi-source leachate derived from any dioxin waste no longer must carry the acute hazardous dioxin waste codes F020-F023 and F025-F027. The Agency is taking such an action based on data showing that dioxins present in multi-source leachate were in very low (or nondetectable) concentrations. The low levels are below the level that the Agency believes warrants classification as an acute hazardous waste.

The commenters pointed to the regulation of dioxin and furans in leachate as an example of the problems associated with application of the waste code carry-through approach. Under the application of the waste code carry-through, if dioxin were found in leachate, no matter what waste was the source of the dioxin, the facility was forced to manage that leachate under the stringent management standards promulgated for acute hazardous listed wastes F020-F023 and F026-F027 due to the presumption that the dioxin was derived from these codes. The Agency agrees that the application of the waste code carry-through has created problems in the management of leachate containing dioxin and furans. The Agency, therefore, is establishing a separate waste code for multi-source leachate (F039) and is promulgating one set of treatment standards for multi-source leachate wastewaters and nonwastewaters. The Agency has also changed its classification of leachate derived exclusively from listed dioxin wastes.

Commenters generally supported EPA's classification of leachate that is derived from the exclusive management of the listed dioxin-containing wastes (F020-F023 and F026-F028) and no other listed hazardous waste, as single source leachate. The wastes covered by these waste codes are acute hazardous dioxin wastes (with the exception of F028) subject to special management standards as well as special and appropriate public and regulatory scrutiny. Most commenters agreed that this approach is appropriate because leachate derived from only these hazardous wastes is likely to contain concentrations of dioxin meriting the need for extraordinary controls and thus should be subject to the same management standards.

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Comment Number: 51-Ci-4

Docket Number: LD12-00268

Commenter: SHEA & GARDENER

Issue: DIOXIN

Subissue: SUPPORT FOR PROPOSED APPROACH

Comment:

Shea & Gardner welcomes this opportunity to submit comments, on behalf of one of our firm's clients, on the recent proposed rule published by the U.S. Environmental Protection Agency relating to land disposal restrictions for the final one-third of listed hazardous wastes under the Resource Conservation and Recovery Act. 54 Fed. Reg. 48,372 (November 22, 1989). Our comments are confined to the Agency's proposals relating to multi-source leachate that derives from wastes containing chlorinated dibenzo-p-dioxins and dibenzofurans ("dioxins" and "furans").

Our client is a major company that handled chlorinated phenols and/or their pesticide derivatives for over 30 years. Throughout this time period, the company may have handled certain wastes associated with chlorinated phenols and/or their pesticide derivatives, as well as other wastes, in land-based units (e.g., landfills or surface impoundments) located at the facility. If generated today, some of these wastes might be characterized as EPA Hazardous Waste Nos. F020-F023 or F026-F027.

Our client is currently collecting and treating leachate from land-based units that may have previously received wastes associated with chlorinated phenols and/or their pesticide derivatives. The company is also collecting and treating groundwater from underneath the facility that may be contaminated with said wastes. The company has analyzed the leachate and groundwater from the facility and not detected dioxins or furans in either material using an average detection limit of less than 0.5 parts per billion ("ppb") and a maximum detection limit of less than 0.75 ppb for the dioxin and furan congener groups. These data support EPA's determination that multi-source leachate does not warrant classification as an acutely hazardous waste, which was based on information gathered from certain large commercial facilities. 54 Fed. Reg. 48,464.

Additionally, EPA has previously made (or proposed) determinations that wastes with levels of dioxins and furans comparable to those indicated by the data from the commercial

cont.

Comment Number: 51-Ci-4

Docket Number: LD12-00268

Commenter: SHEA & GARDENER (continued)

Issue: DIOXIN

Subissue: SUPPORT FOR PROPOSED APPROACH

Comment:

facilities are not properly classifiable as acutely hazardous wastes. For example, EPA has proposed to list as non-acutely hazardous wastes certain wastes from wood preserving operations which contain 5000 ppb (or 5 parts per million ("ppm")) hexachlorinated dibenzo-p-dioxins and "one to two orders of magnitude lower" concentrations of other dioxin homologues. See 53 Fed. Reg. 53,308 (December 30, 1988). Moreover, EPA has determined that wastes with dioxin and furan concentrations comparable to those that may be present in leachate and contaminated groundwater should not be considered acutely or even non-acutely hazardous wastes. See 53 Fed. Reg. 7903 (March 11, 1988) (delisting certain wastes from the incineration of F027); 53 Fed. Reg. 20, 103 (June 2, 1988) (delisting certain wastes from the incineration of F020); 54 Fed. Reg. 27,167 (June 28, 1989) (delisting certain wastes from the incineration of F020). Indeed, EPA has admitted that certain new information regarding the toxicity of dioxins and furans "may affect the Agency's basis for designating F021 and F027 as acute[ly] hazardous." 53 Fed. Reg. 53,307 (December 30, 1988). In the absence of any data demonstrating that leachate or contaminated groundwater derived from F020-F023 or F026-F027 wastes contain significantly higher concentrations of dioxins or furans than indicated in the data discussed above, and in the absence of any data demonstrating that dioxins or furans are substantially more toxic than previously believed, it would be arbitrary for EPA to classify leachate and groundwater contaminated by F020-F023 or F026-F027 as acutely hazardous wastes.

EPA has long recognized that hazardous constituent concentrations are a key factor in determining whether specific waste streams constitute acutely hazardous wastes. In the preamble to the May 19, 1980 rule establishing the criteria for listing acutely hazardous wastes, EPA stated that it intended to apply such criteria only to "discarded pure chemical substances" and "wastes containing substantial concentrations of potent carcinogens." 45 Fed. Reg. 33,106-107 (emphasis added). Similarly, in the final rule establishing the F020-F023 and F026-F027 listings, EPA stated that pentachlorophenol ("PCP") production wastes should be considered acutely hazardous because "the potential toxicity of [dioxin] at the levels found in PCP

cont.

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Comment Number: 51-Ci-4

Docket Number: LD12-00268

Commenter: SHEA & GARDENER (continued)

Issue: DIOXIN

Subissue: SUPPORT FOR PROPOSED APPROACH

Comment:

[wastes] are of regulatory concern and ... these wastes contain significant concentrations of potent carcinogens." 50 Fed. Reg. 9181 (January 14, 1985). It would therefore be contrary to EPA's own regulations for the Agency to classify leachate and contaminated groundwater from F020-F023 and F026-F027 wastes as acutely hazardous wastes without regard for the concentration of dioxins and furans in such materials.

EPA should not mechanically apply its "waste code carry-through" principle to leachate and groundwater derived from or containing F020-F023 or F026-F027 wastes, in the absence of data demonstrating that such leachate or groundwater warrants listing as acutely hazardous waste. The waste code carry-through principle is currently being challenged in the U.S. Court of Appeals for the District of Columbia Circuit on the grounds that leachate and contaminated groundwater are frequently very different, physically and chemically, than the wastes from which they are derived. Moreover, EPA itself has indicated that not all wastes derived from or containing F020-F023 wastes or F026-F027 wastes are acutely hazardous. Indeed, it is for this reason that EPA listed hazardous waste F028, which is a residue from treating soils contaminated with F020-F023 and F026-F027 wastes, as a non-acutely hazardous waste under its own waste code. See 50 Fed. Reg. 2000 (January 14, 1985).

Instead of applying the waste code carry-through principle, EPA should establish a new waste code for all multi-source leachate and groundwater containing such leachate, including leachate and groundwater derived from F020-F023 and F026-F027 wastes. This approach would make it clear that leachate and groundwater derived from F020-F023 and F026-F027 wastes do not pose any special threats to human health or the environment that would warrant "extraordinary regulatory and nonregulatory burdens in the form of extra management standards . . ., permitting obstacles due to public perceptions, extra management costs, and prioritized land disposal prohibitions." 54 Fed. Reg. 48,464-65. Establishing a separate waste code is particularly appropriate because, under EPA's proposal, all multi-source leachate, including leachate derived from F020-F023 and F026-F027 wastes would be subject to a uniform set of treatment standards.

If EPA decides to apply the waste code carry-through principle to leachate and groundwater derived from F020-F023 and F026-F027 wastes, the effects on our client could be substantial. The sludges generated from treating the company's leachate and groundwater, which must be burned to meet the treatment standards

cont.

Comment Number: 51-ci-4

Docket Number: LD12-00268

Commenter: SHGA & GARDENER (continued)

Issue: DIOXIN

Subissue: SUPPORT FOR PROPOSED APPROACH

Comment:

for F001-F005 solvent wastes, could be characterized as F020-F023 or F026-F027 wastes and, if so, the burning of such sludges would have to be performed in an incinerator with a Destruction and Removal Efficiency ("DRE") of 99.9999 percent ("six-9's"). As far as the company has been able to determine, the available capacity of six-9's incinerators permitted to manage F020-F023 and F026-F027 wastes is not sufficient to meet the current demand. Thus, if EPA characterizes the sludges as F020-F023 or F026-F027 wastes and fails to establish a capacity variance for such wastes, our client would be unable to continue managing the sludges. Under these circumstances, the company would be unable to continue collecting and treating leachate and groundwater, even though it is required to do so as part of corrective action for the facility. The company would therefore be placed in a position of forced non-compliance.

Moreover, because the leachate and groundwater have historically been handled together with other wastes from the facility, sludges throughout the waste management system at the facility might be classified as F020-F023 or F026-F027 wastes and, if so, be unable to be properly managed. In this way, the entire waste management system at the facility might be disrupted. These potential results would occur without any benefits whatsoever in terms of protecting human health or the environment.

For the foregoing reasons, EPA should finalize its proposal that the F020-F023 and F026-F027 waste codes not apply to multi-source leachate or groundwater contaminated by such leachate.

Comment Number: 51-Ci-4

Docket Number: LD12-00268

Commenter: Shea & Gardner

Issue: Dioxin

Subissue: Support for Proposed Approach

Response:

Commenters unanimously supported EPA's proposed approach for regulating dioxin- and furan-containing listed wastes in leachate. The Agency is promlugating an approach whereby multi-source leachate derived from any dioxin waste no longer must carry the acute hazardous dioxin waste codes F020-F023 and F026-F028. The Agency is taking such an action based on data showing that dioxins present in multi-source leachate were in very low (or nondetectable) concentrations. The low levels are below the level that the Agency believes warrants classification as an acute hazardous waste.

The commenter contends that leachate and contaminated groundwater from F020-F023 and F026-F027 wastes should not be classified as acute hazardous wastes without regard for the concentrations of dioxins and furans. The Agency does not agree. The Agency is promulgating that leachate derived exclusively from the management of these listed wastes is considered single source leachate and is subject to the management practices associated with these listed acute hazardous wastes. The commenter presented information that at one site where chlorinated phenols and their pesticide derivatives were disposed, analyses of the leachate and groundwater below the site revealed no detection of dioxins or furans using an average detection limit of less than 0.5 ppb and a maximum detection limit of less than 0.75 ppb. The commenter, however, did not include the data with which to support this assertion. The Agency is not persuaded by this information and maintains that the promulgated approach is appropriate because leachate derived from only F020-F023 and F026-F028 is likely to contain concentrations of dioxin meriting the need for control as an acute hazardous waste. Other commenters strongly supported EPA's approach for classifying this type of dioxin waste as single source leachate.

Comment Number: 51-Cii-1

Docket Number: LD12-00081

Commenter: ENVIROSAFE MANAGMENT SERVICES, INC.

Issue: DIOXIN

Subissue: POSTPONE DIOXIN STANDARDS

Comment:

Page 48465, 2nd Col.

The Agency is proposing a treatment standard of one part per billion in the waste for dioxins and furans. However, this proposed treatment standard for dioxins and furans does not coincide with the BDAT treatment standards for multi-source leachate outlined in the charts in the proposal. If the material was found to contain dioxin, however, there are no appropriate treatment facilities available to handle it. EPA should examine the possibility of no standards yet for dioxins until such time as appropriate treatment capacity is available.

Comment Number: 51-Cii-1

Docket Number: LD12-00081

Commenter: Envirosafe Management Services, Inc.

Issue: Dioxin

Subissue: Postpone Dioxin Standards

Response:

The Agency proposed a treatment standard for dioxins and furans nonwastewaters in multi-source leachate of one part per billion (this was explained in the preamble and in the tables of F039 constituent treatment standards). The Agency believes there is a need to establish a treatment standard for these constituents because dioxins and furans have been disposed in landfills and thus may appear in the leachate. The Agency does not expect, however, that dioxins and furans will often be present in multi-source leachate at concentrations requiring treatment. In the event that treatment is required, multi-source leachate containing dioxins and furans is not classified as acute hazardous waste so there are no special management requirements for such waste.

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Comment Number: 51-Di-1

Docket Number: LD12-00092

Commenter: THE FERTILIZER INSTITUTE (continued)

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

TFI believes that the cost of complying with the analytical burden which would be imposed on all generators of multi-source leachate is not justified on the basis of comments made by (presumably) commercial waste disposal facilities regarding the contents of their multi-source leachate. In contrast to the practice of most commercial facilities, units on the site of industrial facilities typically do not accept an infinite range of wastes for disposal. Consequently, there is no reason why such a facility should be required to test for every BDAT list constituent. Instead, non-commercial disposal facilities should be allowed to test only for the BDAT constituents that are likely to be in their leachate based on their assessment of the waste streams that went into the unit from which the multi-source leachate is derived.

The agency's attempt to address what the agency terms "administrative complications" (54 Fed. Reg. 48,463) arising primarily at commercial waste disposal facilities should not inure to the detriment of non-commercial waste disposal facilities. It may be appropriate to require commercial waste disposal facilities to analyze for the entire list of BDAT constituents because they handle a large variety of wastes and they can pass the increased analytical costs on to their

cont..

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Comment Number: 51-D1-1

Docket Number: LD12-00092

Commenter: THE FERTILIZER INSTITUTE (continued)

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

customers. It would not be appropriate for non-commercial disposal facilities to bear the analytical burden or the cost associated with that approach. For these types of facilities, EPA should require analytical testing only for those BDAT list constituents that are likely to be present in the waste stream.

Comment Number: 51-Di-1

Docket Number: LD12-00092

Commenter: The Fertilizer Institute

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

EPA proposed that the treatment standards for multi-source leachate include standards for virtually the entire list of BDAT constituents. This is because multi-source leachate derives potentially from any and all of the listed hazardous wastes. The Agency is not saying that all multi-source leachate contains all of these constituents; it may not. The Agency maintains, however, that the treatment standard for multi-source leachate must account for this possibility and must consequently include all of the potential constituents present in the multi-source leachate. The alternative offered by the commenter, that of requiring analytical testing only for those BDAT list constituents that are likely to be present in the waste stream, could create inconsistencies and major enforcement difficulties.

At the same time, the Agency recognizes that is unnecessary and cumbersome to routinely monitor for constituents that are not present. The Agency agrees that determining which constituents are present in a particular facility's multi-source leachate is site-specific. Under certain circumstances it is possible for the permit writer to specify (based on historical knowledge of the site, on information about the wastes that have been disposed in the unit, or on other information) the constituents that should initially be analyzed. This analysis may not include the entire BDAT list. The facility may not choose to wait until such a site-specific determination is made, however, before treating multi-source leachate. The facility, therefore, is not precluded from obtaining an initial analysis of the entire universe of constituents in F039 and developing a list of constituents to be analyzed on a regular frequency, pending an opportunity for the Agency to prescribe the appropriate constituents for analysis and testing frequency for the facility. It is also recommended that interim status facilities incorporate such an approach into the waste analysis plans that they maintain pursuant to 40 CFR 265.13.

Comment Number: 51-Di-2

Docket Number: LD12-00124

Commenter: ROLLINS ENVIRONMENTAL SERVICES (DE) INC.

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

However, not a great deal is gained and no environmental purpose is served, if all of the constituents on the proposed multi-source leachate treatment standard list must be regularly tested for in the treatment residues -- in order to ascertain whether the standards are met -- in circumstances where those constituents are not in the leachate itself. Since leachate from a given landfill will not vary greatly in its constituents over time, it should be possible to determine which of the constituents on the list actually are in the leachate. Once this has been determined, then it should only be necessary to check the residues from treating the leachate for those particular constituents. EPA should make clear that this is an acceptable approach.

Comment Number: 51-Di-2

Docket Number: LD12-00124

Commenter: Rollins Environmental Services Inc.

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

EPA proposed that the treatment standards for multi-source leachate include standards for virtually the entire list of BDAT constituents. This is because multi-source leachate derives potentially from any and all of the listed hazardous wastes. The Agency is not saying that all multi-source leachate contains all of these constituents; it may not. The Agency maintains, however, that the treatment standard for multi-source leachate must account for this possibility and must consequently include all of the potential constituents present in the multi-source leachate. The alternative offered by the commenter, that of requiring analytical testing only for those BDAT list constituents that are likely to be present in the waste stream, could create inconsistencies and major enforcement difficulties.

At the same time, the Agency recognizes that is unnecessary and cumbersome to routinely monitor for constituents that are not present. The Agency agrees that determining which constituents are present in a particular facility's multi-source leachate is site-specific. Under certain circumstances it is possible for the permit writer to specify (based on historical knowledge of the site, on information about the wastes that have been disposed in the unit, or on other information) the constituents that should initially be analyzed. This analysis may not include the entire BDAT list. The facility may not choose to wait until such a site-specific determination is made, however, before treating multi-source leachate. The facility, therefore, is not precluded from obtaining an initial analysis of the entire universe of constituents in F039 and developing a list of constituents to be analyzed on a regular frequency, pending an opportunity for the Agency to prescribe the appropriate constituents for analysis and testing frequency for the facility. It is also recommended that interim status facilities incorporate such an approach into the waste analysis plans that they maintain pursuant to 40 CFR 265.13.

Comment Number: 51-Di-3

Docket Number: LD12-00138

Commenter: OCCIDENTAL CHEMICAL CORPORATION

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

EPA should also consider the option of allowing a permit writer to determine the BDAT constituents to be analyzed based on original waste treatability groups, or in the case of groundwater contaminated by multi-source leachate, upon the results of the annual groundwater sampling for Appendix IX constituents under 40 C.F.R. Part 264, Subpart F.

Comment Number: 51-Di-3

Docket Number: LD12-00138

Commenter: Occidental Chemical Corporation

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

The Agency agrees that determining which constituents are present in a particular facility's multi-source leachate is site-specific. Under certain circumstances it is possible for the permit writer to specify the constituents that should initially be analyzed. Following the initial analysis, the permit writer may specify in the waste analysis plan the constituents requiring subsequent monitoring, and the frequency of such subsequent monitoring. The permit writer is not precluded from using the information suggested by the commenter in order to make these site-specific determinations, if such information is available and is complete.

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Comment Number: 51-Di-4

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

C. The Agency has other alternatives to limit the amount and scope of analytical work that must be accomplished to demonstrate that a multi-source leachate achieves BDAT standards. It is not necessary to use the treatability group concept to implement these other approaches.

One purpose of the restricted definition, according to EPA, would be to prevent generators from having to sample multi-source leachate for all hazardous constituents with BDAT limits. While GCA agrees that this is a laudatory objective, it does not believe that this is the only way to limit analytical effort to only those hazardous constituents that may be found in a multi-source leachate.

GCA recommends a two-phase approach to this issue, which would be resolved during the permitting process for the landfill and leachate treatment systems. The resulting analytical program for leachate would be specified in the waste analysis plan for the facility. The facility would be given the opportunity to provide the permitting authority with a complete listing of all hazardous wastes disposed of in the landfill, and the hazardous constituents that have BDAT limits for each waste. This list of hazardous constituents could then be used as the initial list of constituents for leachate treatment monitoring. The first phase of the program would be to analyze the leachate for this list of constituents for a specified number of times, for example, 4 times.

The second phase would be based on the analysis of the initial leachate analyses. If these analyses indicated that only a subset of the initially-listed constituents are present in the leachate, subsequent testing would be targeted at only that subset. However, at least once/year a test for all of the initial list of constituents would be performed to assure that new constituents had not appeared in the leachate.

Obviously, there are a number of possible variations on this theme. However, it is reasonably clear that there are a number of different ways, through the permit process, that the number of constituents that have to be routinely monitored by a facility to assure continuing compliance with the BDAT limits can be restricted to only those chemicals that there is reason to believe would be present.

cont.

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Comment Number: 51-Di-4

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY (continued)

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

EPA expresses a concern that the separate waste code approach to multi-source leachate standards could place undue burdens on TSDFs that treat leachates derived from only a few listed wastes, because they would have to test for all constituents on the multi-source leachate list. GCA sees no reason why this would have to be the case, as we have discussed earlier in these comments.

The rule could easily be made sufficiently flexible so that TSDFs could be required to test for a subset of the constituents for which there are BDAT standards, with the subset being based on the constituents that are regulated for the listed wastes that were disposed of in the landfill. If the number of wastes disposed of are few, this will not be a difficult exercise for the TSDF and the permitting authority. The waste analysis plan for the facility could also require a one-time sampling for all of the constituents on the BDAT list for multi-source leachates, with only targeted pollutants being tested on a more routine basis.

This approach is no different from the monitoring approach that the Agency's Industrial Technology Division (ITD) has recommended for organic chemicals, plastics, and synthetic fibers (OCPSF) point source NPDES permit holders, which also are regulated for a large number of pollutants at the BAT level, but which may have only a few of these pollutants in their discharges. There is no reason that the same approach could not be used to assure compliance with the BDAT standards for multi-source leachates.

Comment Number: 51-D1-4

Docket Number: LD12-00151

Commenter: Gulf Coast Waste Disposal Authority

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

The Agency agrees with the commenter that there are a number of possible ways that the number of constituents that have to be monitored by a facility can be determined through the permit process. It has, therefore, established an implementation scheme that allows maximum flexibility to the permit writer to establish such monitoring requirements at a particular facility.

EPA proposed that the treatment standards for multi-source leachate include standards for virtually the entire list of BDAT constituents. This is because multi-source leachate derives potentially from any and all of the listed hazardous wastes. The Agency is not saying that all multi-source leachate contains all of these constituents; it may not. The Agency recognizes that is unnecessary and cumbersome to routinely monitor for constituents that are not present in the multi-source leachate. Determining which constituents are present in a particular facility's multi-source leachate is site-specific, therefore, it is possible for the permit writer to specify (based on historical knowledge of the site, on information about the wastes that have been disposed in the unit, or on other information) the constituents that should initially be analyzed. This analysis may not include the entire BDAT list. Following the initial analysis, the permit writer may specify in the waste analysis plan the constituents requiring subsequent monitoring, and the frequency of such subsequent monitoring. The permit writer is not precluded from adopting an approach similar to the one suggested by the commenter if it is appropriate for the site.

The facility may not choose to wait until such a site-specific determination is made, however, before treating multi-source leachate. The facility, therefore, is not precluded from obtaining an initial analysis of the entire universe of constituents in F039 and developing a list of constituents to be analyzed on a regular frequency, pending an opportunity for the Agency to prescribe the appropriate constituents for analysis and testing frequency for the facility. It is also recommended that interim status facilities incorporate such an approach into the waste analysis plans that they maintain pursuant to 40 CFR 265.13.

Comment Number: 51-Di-5

Docket Number: LDR2-00167

Commenter: WESTINGHOUSE ELECTRIC CORPORATION

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

With respect to Option 2, it is also suggested that testing be limited to the known or suspected constituents to be in the leachate based upon waste code information. This could allow the permit writer to establish testing parameters, frequency and limitations for treatment standard compliance.

Comment Number: 51-Di- 5

Docket Number: LD12-00167

Commenter: Westinghouse Electric Corporation

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

The Agency agrees with the commenter that there are a number of possible ways that the number of constituents that have to be monitored by a facility can be determined through the permit process. It has, therefore, established an implementation scheme that allows maximum flexibility to the permit writer to establish such monitoring requirements at a particular facility.

EPA proposed that the treatment standards for multi-source leachate include standards for virtually the entire list of BDAT constituents. This is because multi-source leachate derives potentially from any and all of the listed hazardous wastes. The Agency is not saying that all multi-source leachate contains all of these constituents; it may not. The Agency recognizes that is unnecessary and cumbersome to routinely monitor for constituents that are not present in the multi-source leachate. Determining which constituents are present in a particular facility's multi-source leachate is site-specific, therefore, it is possible for the permit writer to specify (based on historical knowledge of the site, on information about the wastes that have been disposed in the unit, or on other information) the constituents that should initially be analyzed. This analysis may not include the entire BDAT list. Following the initial analysis, the permit writer may specify in the waste analysis plan the constituents requiring subsequent monitoring, and the frequency of such subsequent monitoring. The permit writer is not precluded from adopting an approach similar to the one suggested by the commenter if it is appropriate for the site.

The facility may not choose to wait until such a site-specific determination is made, however, before treating multi-source leachate. The facility, therefore, is not precluded from obtaining an initial analysis of the entire universe of constituents in F039 and developing a list of constituents to be analyzed on a regular frequency, pending an opportunity for the Agency to prescribe the appropriate constituents for analysis and testing frequency for the facility. It is also recommended that interim status facilities incorporate such an approach into the waste analysis plans that they maintain pursuant to 40 CFR 265.13.

Comment Number: 51-Di-6

Docket Number: LD12-00168

Commenter: AMERICAN PETROLEUM INSTITUTE

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

API also agrees with the EPA position that the monitoring (sampling/analysis) requirements for the constituents in multi-source leachates should be given flexibility through the permit writing process and should be based on monitoring only for pollutants likely to be present.

On the other hand, API disagrees with EPA's contrary suggestion (54 Fed. Reg. 48463) that a land disposer of multi-source leachate would have to analyze for the entire BDAT list of constituents under Option 2. That suggestion is based on the presumption that multi-source leachate is typically derived from disposal of every listed waste, potentially containing any or all BDAT list constituents. That presumption is, at best, unlikely. As EPA itself recognizes in proposing to define multi-source leachate as only leachate from more than one treatability group, there are many instances where leachate is derived from one known group of related wastes or a known subset of treatability groups. In such a case, it would be unnecessary and wasteful to require analysis for all BDAT constituents. Rather, EPA should not require the disposal facility to analyze for constituents that, based on the operator's knowledge, are highly unlikely to be present.

Comment Number: 51-Di-6

Docket Number: LD12- 00168

Commenter: AMERICAN PETROLEUM INSTITUTE (continued)

Issue: ANALYSIS / MONITORING

Subissue: EPA'S PROPOSSED APPROACH

Comment:

API supports Option 2 in which one set of standards is established for wastewaters and non-wastewaters of multi-sourca leachate, with the permit writer having the flexibility to define those BDAT constituents for which the leachate should be tested and the frequency of said tests.

1/2

Comment Number: 51-Bii-3

Docket Number: LD12-00168

Commenter: AMERICAN PETROLEUM INSTITUTE

Issue: DEFINITION

Subissue: SUPPORT DEFINITION BASED ON MORE THAN ONE TREATABILITY GROUP

Comment:

III. A.7.a&b - Definition of Multi-source Leachate; Treatment Standards for Multi-source Leachate

(a) EPA requests comments on whether multi-source leachate should be defined as leachate derived from more than one listed hazardous waste (i.e., more than one waste code), or as leachate derived from more than one treatability group of wastes (i.e., groups of wastes from a specific industry or process, such as petroleum refining wastes). API supports the latter definition. Multi-source leachate should be defined as leachate from more than one treatability group since the treatment standards for various wastes within a single treatability group should be the same or very similar. Such a limited definition would help avoid the problem noted by EPA that would arise if multi-source were defined as leachate from more than one waste (i.e., the need to meet standards for virtually all toxic pollutants). Classifying leachate from a single treatability group as single-source leachate, by contrast, presumably would limit the number of applicable standards to those related to the wastes within that treatability group.

Cont.

Comment Number: 51-Di- 6

Docket Number: LD12-00168

Commenter: American Petroleum Institute

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

The Agency agrees with the commenter that there are a number of possible ways that the number of constituents that have to be monitored by a facility can be determined through the permit process. It has, therefore, established an implementation scheme that allows maximum flexibility to the permit writer to establish such monitoring requirements at a particular facility.

EPA proposed that the treatment standards for multi-source leachate include standards for virtually the entire list of BDAT constituents. This is because multi-source leachate derives potentially from any and all of the listed hazardous wastes. The Agency is not saying that all multi-source leachate contains all of these constituents; it may not. The Agency recognizes that is unnecessary and cumbersome to routinely monitor for constituents that are not present in the multi-source leachate. Determining which constituents are present in a particular facility's multi-source leachate is site-specific, therefore, it is possible for the permit writer to specify (based on historical knowledge of the site, on information about the wastes that have been disposed in the unit, or on other information) the constituents that should initially be analyzed. This analysis may not include the entire BDAT list. Following the initial analysis, the permit writer may specify in the waste analysis plan the constituents requiring subsequent monitoring, and the frequency of such subsequent monitoring. The permit writer is not precluded from adopting an approach similar to the one suggested by the commenter if it is appropriate for the site.

The facility may not choose to wait until such a site-specific determination is made, however, before treating multi-source leachate. The facility, therefore, is not precluded from obtaining an initial analysis of the entire universe of constituents in F039 and developing a list of constituents to be analyzed on a regular frequency, pending an opportunity for the Agency to prescribe the appropriate constituents for analysis and testing frequency for the facility. It is also recommended that interim status facilities incorporate such an approach into the waste analysis plans that they maintain pursuant to 40 CFR 265.13.

Comment Number: 51-Di-7

Docket Number: LD12 - 00173

Commenter: CH2M HILL

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

Specification of Monitoring Frequency by the Permit Writer

The Agency proposes that the frequency of monitoring for constituents (or indicator parameters) be left to the judgment of the permit writer, who would specify monitoring frequency in the facility's waste analysis plan. The Committee strongly supports this approach and would like this principle stated in the regulation as well as in the preamble.

E. OTHER ISSUES

- The Committee strongly supports the Agency's proposal that frequency of monitoring for constituents (or indicator parameters) be left to the judgment of the permit writer.
- The Committee believes that all multi-source leachate should be characterized initially for the entire set of BDAT compounds.
- The permit writer should have discretion to assign (a) the appropriate treatment standards and (b) the constituents to be monitored.

Comment Number: 51-Di-7

Docket Number: LD12-00173

Commenter: CH2M Hill

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

The commenter agrees with the Agency's proposed approach for implementing the waste analysis and monitoring requirements for multi-source leachate. After an initial analysis that may include the entire BDAT list, subsequent analysis and frequency of monitoring would be left to the judgement of the permit writer, who would specify analysis requirements in the facility's waste analysis plan. While the final approach is basically the same as the proposed approach, the Agency has determined that it is preferrable to allow the permit writer maximum flexibility in making all site-specific determinations, including that of determining the wastes that should be included in the initial analysis. The facility, however, is not precluded from obtaining an initial analysis of the entire list of constituents.

The commenter requested that this principle be stated in the regulation as well as in the preamble. The Agency established a new Class 1 permit modification with prior approval for the purpose of providing an expeditious way to address the appropriate F039 waste analysis procedures. This appears in the regulatory language at 40 CFR 270.42, Appendix I, item B(1)(b).

Comment Number: 51-Di-8

Docket Number: LD12-00179

Commenter: THE DOW CHEMICAL COMPANY

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

C. EPA SHOULD ALLOW PERMIT WRITERS TO SELECT INDICATOR PARAMETERS AND SPECIFY MONITORING FREQUENCIES FOR MULTISOURCE LEACHATE.

In the preamble to the Third Third rule, EPA states that it "envisions the rule [at least for multisource leachate] being implemented by leaving the frequency of monitoring for constituents (or indicator parameters) to the judgment of the permit writer, who would specify monitoring frequency in the facility's waste analysis plan." 54 Fed. Reg. 48,462. Dow strongly supports this approach and, in fact, believes that it should be incorporated directly into the regulations.

The proposed treatment standards for multisource leachate cover a vast number of hazardous constituents. Monitoring for all of these constituents (not only in the leachate, but also in all leachate treatment residues and all mixtures containing leachate) is both impractical and unnecessary. Depending upon the nature of the underlying wastes (as well as other factors), many of the BDAT constituents can not be present in a given multisource leachate. Moreover, monitoring of a much smaller range of hazardous constituents will generally ensure that leachate is properly treated. Thus, it would be an onerous and unnecessary burden to require all facilities to monitor the full array of BDAT constituents.

Of course, the proper selection of indicator parameters and testing frequencies will depend on site-specific factors. For this reason, Dow believes that the most appropriate mechanism for such selection is through the permitting process.

Comment Number: 51-Di-8

Docket Number: LD12-00179

Commenter: The Dow Chemical Company

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

The commenter agrees with the Agency's proposed approach for implementing the waste analysis and monitoring requirements for multi-source leachate. After an initial analysis that may include the entire BDAT list, subsequent analysis and frequency of monitoring would be left to the judgement of the permit writer, who would specify analysis requirements in the facility's waste analysis plan. While the final approach is basically the same as the proposed approach, the Agency has determined that it is preferrable to allow the permit writer maximum flexibility in making all site-specific determinations, including that of determining the wastes that should be included in the initial analysis. The facility, however, is not precluded from obtaining an initial analysis of the entire list of constituents.

The commenter raises the issue of allowing the permit writer to also select indicator parameters. The Agency does not agree. Indicator parameters are established for purposes of analysis and compliance monitoring in cases when the waste constituent cannot be measured. The Agency is regulating in multi-source leachate only constituents that can be measured, therefore, there is no need for the Agency (or the permit writer) to determine indicator parameters for this waste.

Comment Number: 51-Di-9

Docket Number: LD12-00190

Commenter: UNION CARBIDE CHEMICALS AND PLASTICS COMPANY, INC.

Issue: ANALYSIS/ MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

For determining BDAT compliance with multi-source leachate standards, UCC strongly supports the use of best professional judgement (BPJ) to limit the analysis to only those constituents deposited in the facility and opposes the need to analyze for all of the BDAT standards. This would reduce the analytical burden and allow the use of waste and site specific standards where practical.

Comment Number: 51-D1-9

Docket Number: LD12-00190

Commenter: Union Carbide Chemicals and Plastics Company, Inc.

Issue: **Analysis/Monitoring**

Subissue: **EPA's Proposed Approach**

Response:

The Agency agrees with the commenter that there are a number of possible ways that the number of constituents that have to be monitored by a facility can be determined through the permit process. It has, therefore, established an implementation scheme that allows maximum flexibility to the permit writer to establish such monitoring requirements at a particular facility.

EPA proposed that the treatment standards for multi-source leachate include standards for virtually the entire list of BDAT constituents. This is because multi-source leachate derives potentially from any and all of the listed hazardous wastes. The Agency is not saying that all multi-source leachate contains all of these constituents; it may not. The Agency recognizes that is unnecessary and cumbersome to routinely monitor for constituents that are not present in the multi-source leachate. Determining which constituents are present in a particular facility's multi-source leachate is site-specific, therefore, it is possible for the permit writer to specify (based on historical knowledge of the site, on information about the wastes that have been disposed in the unit, or on other information) the constituents that should initially be analyzed. This analysis may not include the entire BDAT list. Following the initial analysis, the permit writer may specify in the waste analysis plan the constituents requiring subsequent monitoring, and the frequency of such subsequent monitoring. The permit writer is not precluded from adopting an approach similar to the one suggested by the commenter if it is appropriate for the site.

The facility may not choose to wait until such a site-specific determination is made, however, before treating multi-source leachate. The facility, therefore, is not precluded from obtaining an initial analysis of the entire universe of constituents in F039 and developing a list of constituents to be analyzed on a regular frequency, pending an opportunity for the Agency to prescribe the appropriate constituents for analysis and testing frequency for the facility. It is also recommended that interim status facilities incorporate such an approach into the waste analysis plans that they maintain pursuant to 40 CFR 265.13.

Comment Number: 51-Di-10

Docket Number: LD12-00198

Commenter: DEPARTMENT OF ENERGY

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

EPA has stated that the monitoring frequency for multisource leachate would be set in individual facility's waste analysis plans, and would be left to the judgement of the permit writer. DOE also agrees with this approach, but would like to see it expanded. Specifically, in the event that EPA determines that establishment of numerical standards is more appropriate for multi-source leachate, DOE recommends that the constituents to be analyzed be also based on the individual characteristics of the leachate and the facility, and be set by the permit writer. In this manner, the analytical burden that most facilities would face, could be reduced to a subset of constituents that could be used as indicators of the success of the treatment process.

Comment Number: 51-Di-10

Docket Number: LD12-00198

Commenter: Department of Energy

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

The Agency agrees with the commenter that there are a number of possible ways that the number of constituents that have to be monitored by a facility can be determined through the permit process. It has, therefore, established an implementation scheme that allows maximum flexibility to the permit writer to establish such monitoring requirements at a particular facility.

EPA proposed that the treatment standards for multi-source leachate include standards for virtually the entire list of BDAT constituents. This is because multi-source leachate derives potentially from any and all of the listed hazardous wastes. The Agency is not saying that all multi-source leachate contains all of these constituents; it may not. The Agency recognizes that is unnecessary and cumbersome to routinely monitor for constituents that are not present in the multi-source leachate. Determining which constituents are present in a particular facility's multi-source leachate is site-specific, therefore, it is possible for the permit writer to specify (based on historical knowledge of the site, on information about the wastes that have been disposed in the unit, or on other information) the constituents that should initially be analyzed. This analysis may not include the entire BDAT list. Following the initial analysis, the permit writer may specify in the waste analysis plan the constituents requiring subsequent monitoring, and the frequency of such subsequent monitoring. The permit writer is not precluded from adopting an approach similar to the one suggested by the commenter if it is appropriate for the site.

The facility may not choose to wait until such a site-specific determination is made, however, before treating multi-source leachate. The facility, therefore, is not precluded from obtaining an initial analysis of the entire universe of constituents in F039 and developing a list of constituents to be analyzed on a regular frequency, pending an opportunity for the Agency to prescribe the appropriate constituents for analysis and testing frequency for the facility. It is also recommended that interim status facilities incorporate such an approach into the waste analysis plans that they maintain pursuant to 40 CFR 265.13.

Comment Number: 51-Di-11

Docket Number: LD12-00214

Commenter: BROWNING-FERRIS INDUSTRIES

Issue: ANALYSIS / MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

To the extent that facilities generate leachate from only a limited number of underlying wastes, which is apparently the situation prompting the proposal of the first option, we believe that can be handled through the individual permit writer. It is critical, as the Agency notes, that the permit writer have the flexibility on a case specific basis to determine the frequency of monitoring and the constituents (or indicators) to be analyzed, given the large number of constituents potentially covered by a leachate standard. Giving the permit writer that flexibility -- as the Agency indicates will be the case, 54 Fed.Reg. 48462 (col.3) -- should adequately address the issue posed by leachate with a limited number of underlying wastes and should obviate the need for the first option.

Comment Number: 51-D1-11

Docket Number: LD12-00214

Commenter: Browning-Ferris Industries

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

The Agency agrees with the commenter that there are a number of possible ways that the number of constituents that have to be monitored by a facility can be determined through the permit process. It has, therefore, established an implementation scheme that allows maximum flexibility to the permit writer to establish such monitoring requirements at a particular facility.

EPA proposed that the treatment standards for multi-source leachate include standards for virtually the entire list of BDAT constituents. This is because multi-source leachate derives potentially from any and all of the listed hazardous wastes. The Agency is not saying that all multi-source leachate contains all of these constituents; it may not. The Agency recognizes that is unnecessary and cumbersome to routinely monitor for constituents that are not present in the multi-source leachate. Determining which constituents are present in a particular facility's multi-source leachate is site-specific, therefore, it is possible for the permit writer to specify (based on historical knowledge of the site, on information about the wastes that have been disposed in the unit, or on other information) the constituents that should initially be analyzed. This analysis may not include the entire BDAT list. Following the initial analysis, the permit writer may specify in the waste analysis plan the constituents requiring subsequent monitoring, and the frequency of such subsequent monitoring. The permit writer is not precluded from adopting an approach similar to the one suggested by the commenter if it is appropriate for the site.

The facility may not choose to wait until such a site-specific determination is made, however, before treating multi-source leachate. The facility, therefore, is not precluded from obtaining an initial analysis of the entire universe of constituents in F039 and developing a list of constituents to be analyzed on a regular frequency, pending an opportunity for the Agency to prescribe the appropriate constituents for analysis and testing frequency for the facility. It is also recommended that interim status facilities incorporate such an approach into the waste analysis plans that they maintain pursuant to 40 CFR 265.13.

Comment Number: 51-Di-12

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION

Issue: ANALYSIS/MONITORING

Subissue: EPA'S PROPOSED APPROACH

Comment:

In particular, EPA should consider the option of allowing a permit writer to determine the BDAT constituents to be analyzed based upon treatability groups, or in the case of groundwater contaminated by multi-source leachate, upon the results of the annual groundwater sampling for Appendix IX constituents under 40 C.F.R. Part 264, Subpart F. This will target the analysis to those constituents that are likely to be present and significantly reduce analytical costs.

Comment Number: 51-Di- 12

Docket Number: LD12-L0007

Commenter: The Chemical Manufacturers Association

Issue: Analysis/Monitoring

Subissue: EPA's Proposed Approach

Response:

The Agency agrees with the commenter that there are a number of possible ways that the number of constituents that have to be monitored by a facility can be determined through the permit process. It has, therefore, established an implementation scheme that allows maximum flexibility to the permit writer to establish such monitoring requirements at a particular facility.

EPA proposed that the treatment standards for multi-source leachate include standards for virtually the entire list of BDAT constituents. This is because multi-source leachate derives potentially from any and all of the listed hazardous wastes. The Agency is not saying that all multi-source leachate contains all of these constituents; it may not. The Agency recognizes that is unnecessary and cumbersome to routinely monitor for constituents that are not present in the multi-source leachate. Determining which constituents are present in a particular facility's multi-source leachate is site-specific, therefore, it is possible for the permit writer to specify (based on historical knowledge of the site, on information about the wastes that have been disposed in the unit, or on other information) the constituents that should initially be analyzed. This analysis may not include the entire BDAT list. Following the initial analysis, the permit writer may specify in the waste analysis plan the constituents requiring subsequent monitoring, and the frequency of such subsequent monitoring. The permit writer is not precluded from adopting an approach similar to the one suggested by the commenter if it is appropriate for the site.

The facility may not choose to wait until such a site-specific determination is made, however, before treating multi-source leachate. The facility, therefore, is not precluded from obtaining an initial analysis of the entire universe of constituents in F039 and developing a list of constituents to be analyzed on a regular frequency, pending an opportunity for the Agency to prescribe the appropriate constituents for analysis and testing frequency for the facility. It is also recommended that interim status facilities incorporate such an approach into the waste analysis plans that they maintain pursuant to 40 CFR 265.13.

Comment Number: 51-Dii-1

Docket Number: LD12-00135

Commenter: US Air Force Plant #44

Issue: ANALYSIS/MONITORING

Subissue: INDICATOR PARAMETERS

Comment:

4. In order to facilitate compliance and improve either option, the agency should invest the time and resources to composite the approximately 300 appendix XIII constituents into the minimum number of treatability technology groups and similar chemical family groups. Then, the agency should identify "indicator parameters" from each chemical family treatability group, so as to minimize the number of constituents requiring analyses, thereby providing more realistically achievable treatment trains and performance standards.

Comment Number: 51-Dii-1

Docket Number: LD12-00135

Commenter: U.S. Air Force Plant #44

Issue: Analysis/Monitoring

Subissue: Indicator Parameters

Response:

The Agency may elect not to regulate every BDAT List constituent that is present or suspected to be present in a listed waste. At times, EPA selects an appropriate subset of constituents for regulation in order to facilitate compliance and enforcement. In selecting constituents for regulation, the Agency considers, among other factors, the relative difficulty involved in treating each constituent by the treatment technology identified as BDAT. The subset of constituents selected should ensure that other constituents of concern are adquately treated when the treatment standards for the regulated constituents are met. Waste characteristics affecting the performance of the treatment technology (WCAPs) are used to identify the hardest to treat constituents present in a waste. These constituents may then be selected for regulation and used as surrogates for other non-regulated constituents of concern to ensure that they are adequately treated. For incineration technologies, WCAPs include a constituent's boiling point for nonwastewater residuals and a constituent's bond dissociation energy (BDE) for wastewater residuals. Constituents with higher boiling points and BDEs are considered to be more difficult to treat than those with lower boiling points and BDEs for nonwastewater and wastewater residuals, respectively.

There is much analytical work involved with developing such indicator parameters, and it would take a great amount of time to categorize the constituents on the BDAT List into groupings and make the above-mentioned determinations. The Agency acknowledges the commenter's suggestion that the Agency take the time and resources to composite the constituents in multi-source leachate and to develop indicator compounds for each treatability group. The Agency regrets, however, that it has neither the time nor the resources within the constraints of promulgating the Third Third final rule to accomplish such an ambitious undertaking. The Agency notes that neither the commenter nor anyone else provide suggestions as to what parameters could serve as indicators for the constituents in this waste.

The Agency devoted time to an attempt to develop indicator parameters for dioxin and furan wastes in multi-source leachate. The Agency was unable to find a suitable surrogate for the dioxins and furans because there was no constituent that was more difficult to treat than these constituents (with boiling points ranging from 400 to 500 degrees Celsius and BDEs ranging from 960 to 2,490 kcal/mole), and therefore would ensure adequate treatment of the dioxins and furans. Also, the Agency was unable to identify an appropriate surrogate that was present at treatable levels in all multi-source leachates containing the dioxin and furan

constituents. It is likely that the difficulties encountered when looking for a dioxin and furan surrogate will also be encountered when looking for other surrogates in this highly variable waste. The Agency reiterates that it has neither the time nor the resources to accomplish such an ambitious undertaking at this time.

Comment Number: 51-Dii-2

Docket Number: LD12-00113

Commenter: MICHIGAN DISPOSAL, INC.

Issue: ANALYSIS/MONITORING

Subissue: INDICATOR PARAMETERS

Comment:

3. MULTI-SOURCE LEACHATES

The proposed options for applicability of BDAT treatment standards for multi-source leachate and residues from leachate treatment are:

a) Waste Code Carry-Through: Continued application of treatment standards for the waste codes that were actually disposed.
or
b) Fixed Set of Standards: Application of one fixed set of wastewater treatment standards and one set of nonwastewater treatment standards for all multi-source leachate and treatment residues.

For both options the number of applicable concentration based constituent standards could be very large (ie. more than 200) This broad spectrum must be reduced to a workable set of indicator parameters representing the constituents most likely to migrate under disposal conditions.

Comment Number: 51-Dii-2

Docket Number: LD12-00113

Commenter: Michigan Disposal, Inc.

Issue: Analysis/Monitoring

Subissue: Indicator Parameters

Response:

The Agency may elect not to regulate every BDAT List constituent that is present or suspected to be present in a listed waste. At times, EPA selects an appropriate subset of constituents for regulation in order to facilitate compliance and enforcement. In selecting constituents for regulation, the Agency considers, among other factors, the relative difficulty involved in treating each constituent by the treatment technology identified as BDAT. The subset of constituents selected should ensure that other constituents of concern are adquately treated when the treatment standards for the regulated constituents are met. Waste characteristics affecting the performance of the treatment technology (WCAPs) are used to identify the hardest to treat constituents present in a waste. These constituents may then be selected for regulation and used as surrogates for other non-regulated constituents of concern to ensure that they are adequately treated. For incineration technologies, WCAPs include a constituent's boiling point for nonwastewater residuals and a constituent's bond dissociation energy (BDE) for wastewater residuals. Constituents with higher boiling points and BDEs are considered to be more difficult to treat than those with lower boiling points and BDEs for nonwastewater and wastewater residuals, respectively.

There is much analytical work involved with developing such indicator parameters, and it would take a great amount of time to categorize the constituents on the BDAT List into groupings and make the above-mentioned determinations. The Agency acknowledges the commenter's suggestion that the Agency take the time and resources to composite the constituents in multi-source leachate and to develop indicator compounds for each treatability group. The Agency regrets, however, that it has neither the time nor the resources within the constraints of promulgating the Third Third final rule to accomplish such an ambitious undertaking. The Agency notes that neither the commenter nor anyone else provide suggestions as to what parameters could serve as indicators for the constituents in this waste.

The Agency devoted time to an attempt to develop indicator parameters for dioxin and furan wastes in multi-source leachate. The Agency was unable to find a suitable surrogate for the dioxins and furans because there was no constituent that was more difficult to treat than these constituents (with boiling points ranging from 400 to 500 degrees Celsius and BDEs ranging from 960 to 2,490 kcal/mole), and therefore would ensure adequate treatment of the dioxins and furans. Also, the Agency was unable to identify an appropriate surrogate that was present at treatable levels in all multi-source leachates containing the dioxin and furan

constituents. It is likely that the difficulties encountered when looking for a dioxin and furan surrogate will also be encountered when looking for other surrogates in this highly variable waste. The Agency reiterates that it has neither the time nor the resources to accomplish such an ambitious undertaking at this time.

Comment Number: 51-D11-3

Docket Number: LD12-00130

Commenter: WAYNE DISPOSAL, INC.

Issue: ANALYSIS/MONITORING

Subissue: INDICATOR PARAMETERS

Comment:

1. MULTI-SOURCE LEACHATES

The proposed options for applicability of BDAT treatment standards for multi-source leachate and residues from leachate treatment are:

a) Waste Code Carry-Through: Continued application of treatment standards for the waste codes that were actually disposed.
or
b) Fixed Set of Standards: Application of one fixed set of wastewater treatment standards and one set of nonwastewater treatment standards for all multi-source leachate and treatment residues.

For both options the number of applicable concentration based constituent standards could be very large (ie. more than 200) This broad spectrum must be reduced to a workable set of indicator parameters representing the constituents most likely to migrate under disposal conditions.

Comment Number: 51-Dii-3

Docket Number: LD12-00130

Commenter: Wayne Disposal, Inc.

Issue: Analysis/Monitoring

Subissue: Indicator Parameters

Response:

The Agency may elect not to regulate every BDAT List constituent that is present or suspected to be present in a listed waste. At times, EPA selects an appropriate subset of constituents for regulation in order to facilitate compliance and enforcement. In selecting constituents for regulation, the Agency considers, among other factors, the relative difficulty involved in treating each constituent by the treatment technology identified as BDAT. The subset of constituents selected should ensure that other constituents of concern are adquately treated when the treatment standards for the regulated constituents are met. Waste characteristics affecting the performance of the treatment technology (WCAPs) are used to identify the hardest to treat constituents present in a waste. These constituents may then be selected for regulation and used as surrogates for other non-regulated constituents of concern to ensure that they are adequately treated. For incineration technologies, WCAPs include a constituent's boiling point for nonwastewater residuals and a constituent's bond dissociation energy (BDE) for wastewater residuals. Constituents with higher boiling points and BDEs are considered to be more difficult to treat than those with lower boiling points and BDEs for nonwastewater and wastewater residuals, respectively.

There is much analytical work involved with developing such indicator parameters, and it would take a great amount of time to categorize the constituents on the BDAT List into groupings and make the above-mentioned determinations. The Agency acknowledges the commenter's suggestion that the Agency take the time and resources to composite the constituents in multi-source leachate and to develop indicator compounds for each treatability group. The Agency regrets, however, that it has neither the time nor the resources within the constraints of promulgating the Third Third final rule to accomplish such an ambitious undertaking. The Agency notes that neither the commenter nor anyone else provide suggestions as to what parameters could serve as indicators for the constituents in this waste.

The Agency devoted time to an attempt to develop indicator parameters for dioxin and furan wastes in multi-source leachate. The Agency was unable to find a suitable surrogate for the dioxins and furans because there was no constituent that was more difficult to treat than these constituents (with boiling points ranging from 400 to 500 degrees Celsius and BDEs ranging from 960 to 2,490 kcal/mole), and therefore would ensure adequate treatment of the dioxins and furans. Also, the Agency was unable to identify an appropriate surrogate that was present at treatable levels in all multi-source leachates containing the dioxin and furan

constituents. It is likely that the difficulties encountered when looking for a dioxin and furan surrogate will also be encountered when looking for other surrogates in this highly variable waste. The Agency reiterates that it has neither the time nor the resources to accomplish such an ambitious undertaking at this time.

Comment Number: 51-Diii-1

Docket Number: LD12-00138

Commenter: OCCIDENTAL CHEMICAL CORPORATION

Issue: ANALYSIS/MONITORING

Subissue: BDAT LIST AS SURROGATE LIST FOR UNANALYZABLE CONSTITUENTS

Comment:

D. The Multi-Source Leachate BDAT List Will Adequately Serve as a Surrogate for Non-Analyzable Constituents, Obviating the Need for Specifying Treatment Methods.

In light of the wide-ranging list of hazardous constituents that would have to be treated under the multi-source leachate standard, it is difficult to conceive of a situation where treatment would not also be provided for the non-analyzable components of the leachate. Thus, OxyChem agrees with EPA that the BDAT list will serve as a surrogate for those constituents for which there are no analytical methods.

EPA should bear in mind that many of the compounds for which there are no analytic methods are rather unusual, and would not often be found in multi-source leachates. In addition, the concentrations of such compounds would be very low because leachates or groundwaters are involved. Indeed, although many waste codes carry through because of possible past disposal, in reality only a relatively small number of hazardous constituents carry through to leachate or groundwater or derived-from wastes at detectable concentrations.

Comment Number: 51-Diii-1

Docket Number: LD12-00138

Commenter: Occidental Chemical Corporation

Issue: Analysis/Monitoring

Subissue: BDAT List as Surrogate List for Unanalyzable Constituents

Response:

The Agency is promulgating concentration-based treatment standards to be met in multi-source leachate and its residuals prior to land disposal. It is EPA's conclusion that establishing treatment standards for each BDAT constituent obviates the need to specify methods of treatment for constituents which cannot be analyzed. In other words, the BDAT list serves as a surrogate for those constituents for which there are no analytical methods. For example, where the Agency does not have data for a constituent, data are transferred from a structurally similar compound that is harder to treat and is likely to be treated by the same treatment methodology. Commenters generally supported this use of the BDAT list as a surrogate list for unanalyzable constituents in multi-source leachate.

The Agency notes that this approach is appropriate in cases where the constituents of concern are unanalyzable because it represents the Agency's best efforts to establish treatment standards, thus preventing the constituents of concern from being totally banned from land disposal. The only other alternative to the use of surrogates for unanalyzable constituents is to establish a required method of treatment. The Agency believes that neither the use of surrogates nor the establishment of required methods of treatment is the best approach for multi-source leachate. All the constituents in multi-source leachate can be analyzed, and furthermore, the Agency lacks the data needed to determine surrogates and has neither the time nor the resources to develop such data in the constraints of promulgating the Third Third final rule.

Comment Number: 51-Diii-2

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY

Issue: ANALYSIS / MONITORING

Subissue: BDAT LIST AS SURROGATE FOR UNANALYZABLE CONSTITUENTS

Comment:

C. GCA agrees with EPA that the list of constituents regulated for multi-source leachate will serve as satisfactory surrogates for those constituents that cannot be measured.

EPA solicits comments on the usefulness of the BDAT list constituents as surrogates for those hazardous constituents for which no analytical methods are available. GCA supports the Agency's conclusion that the BDAT list will be adequate for such constituents in multi-source leachates. The constituents on the list cover an extremely wide range of chemicals, with a corresponding range in physical, chemical, and treatability characteristics. It is reasonable to assume that achieving the standards for the listed constituents will also result in BDAT for constituents that cannot be accurately measured in wastes; it is probable that constituents that cannot be measured will have similar treatability properties to at least one or more of the regulated constituents.

Comment Number: 51-Diii- 2

Docket Number: LD12-00151

Commenter: Gulf Coast Waste Disposal Authority

Issue: Analysis/Monitoring

Subissue: BDAT List as Surrogate List for Unanalyzable Constituents

Response:

The Agency is promulgating concentration-based treatment standards to be met in multi-source leachate and its residuals prior to land disposal. It is EPA's conclusion that establishing treatment standards for each BDAT constituent obviates the need to specify methods of treatment for constituents which cannot be analyzed. In other words, the BDAT list serves as a surrogate for those constituents for which there are no analytical methods. For example, where the Agency does not have data for a constituent, data are transferred from a structurally similar compound that is harder to treat and is likely to be treated by the same treatment methodology. Commenters generally supported this use of the BDAT list as a surrogate list for unanalyzable constituents in multi-source leachate.

The Agency notes that this approach is appropriate in cases where the constituents of concern are unanalyzable because it represents the Agency's best efforts to establish treatment standards, thus preventing the constituents of concern from being totally banned from land disposal. The only other alternative to the use of surrogates for unanalyzable constituents is to establish a required method of treatment. The Agency believes that neither the use of surrogates nor the establishment of required methods of treatment is the best approach for multi-source leachate. All the constituents in multi-source leachate can be analyzed, and furthermore, the Agency lacks the data needed to determine surrogates and has neither the time nor the resources to develop such data in the constraints of promulgating the Third Third final rule.

Comment Number: 51-Diii-3

Docket Number: LD12-00190

Commenter: UNION CARBIDE CHEMICALS AND PLASTICS COMPANY, INC.

Issue: ANALYSIS/MONITORING

Subissue: BDAT LIST AS SURROGATE LIST FOR UNANALYZABLE CONSTITUENTS

Comment:

UCC also supports the use of surrogates for non-analyzable constituents. The wide range of hazardous constituents that must be treated under the multi-source leachate standard would more than ensure that adequate treatment would be provided for non-analyzable components of the leachate.

Comment Number: 51-Diii-3

Docket Number: LD12-00190

Commenter: Union Carbide Chemicals and Plastics Company, Inc.

Issue: Analysis/Monitoring

Subissue: BDAT List as Surrogate List for Unanalyzable Constituents

Response:

The Agency is promulgating concentration-based treatment standards to be met in multi-source leachate and its residuals prior to land disposal. It is EPA's conclusion that establishing treatment standards for each BDAT constituent obviates the need to specify methods of treatment for constituents which cannot be analyzed. In other words, the BDAT list serves as a surrogate for those constituents for which there are no analytical methods. For example, where the Agency does not have data for a constituent, data are transferred from a structurally similar compound that is harder to treat and is likely to be treated by the same treatment methodology. Commenters generally supported this use of the BDAT list as a surrogate list for unanalyzable constituents in multi-source leachate.

The Agency notes that this approach is appropriate in cases where the constituents of concern are unanalyzable because it represents the Agency's best efforts to establish treatment standards, thus preventing the constituents of concern from being totally banned from land disposal. The only other alternative to the use of surrogates for unanalyzable constituents is to establish a required method of treatment. The Agency believes that neither the use of surrogates nor the establishment of required methods of treatment is the best approach for multi-source leachate. All the constituents in multi-source leachate can be analyzed, and furthermore, the Agency lacks the data needed to determine surrogates and has neither the time nor the resources to develop such data in the constraints of promulgating the Third Third final rule.

Comment Number: 51-Diii-4

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION

Issue: ANALYSIS / MONITORING

Subissue: BDAT LIST AS SURROGATE LIST FOR UNANALYZABLE CONSTITUENTS

Comment:

E. The Multi-Source Leachate BDAT List Will Adequately Serve as a Surrogate for Non-Analyzable Constituents, Obviating the Need for Specifying Treatment Methods.

In light of the wide-ranging list of hazardous constituents that will be treated under the multi-source leachate standard, treatment will also be provided for those non-analyzable components of the leachate. Thus, CMA agrees with EPA that the BDAT list will serve as a surrogate for those constituents for which there are no analytical methods.

Many of the compounds for which there are no analytic methods are rather unusual, and will not often be found in multi-source leachates. In addition, the concentrations of such components will be very low because they are in leachates or groundwater. Indeed, one of the peculiarities of the present waste code carry-through scheme is that, although many waste codes carry through because of possible past disposal, in reality only a relatively small number of hazardous constituents themselves actually carry through to leachate or derived-from wastes at detectable concentrations.

Comment Number: 51-Diii-4

Docket Number: LD12-L0007

Commenter: The Chemical Manufacturers Association

Issue: Analysis/Monitoring

Subissue: BDAT List as Surrogate List for Unanalyzable Constituents

Response:

The Agency is promulgating concentration-based treatment standards to be met in multi-source leachate and its residuals prior to land disposal. It is EPA's conclusion that establishing treatment standards for each BDAT constituent obviates the need to specify methods of treatment for constituents which cannot be analyzed. In other words, the BDAT list serves as a surrogate for those constituents for which there are no analytical methods. For example, where the Agency does not have data for a constituent, data are transferred from a structurally similar compound that is harder to treat and is likely to be treated by the same treatment methodology. Commenters generally supported this use of the BDAT list as a surrogate list for unanalyzable constituents in multi-source leachate.

The Agency notes that this approach is appropriate in cases where the constituents of concern are unanalyzable because it represents the Agency's best efforts to establish treatment standards, thus preventing the constituents of concern from being totally banned from land disposal. The only other alternative to the use of surrogates for unanalyzable constituents is to establish a required method of treatment. The Agency believes that neither the use of surrogates nor the establishment of required methods of treatment is the best approach for multi-source leachate. All the constituents in multi-source leachate can be analyzed, and furthermore, the Agency lacks the data needed to determine surrogates and has neither the time nor the resources to develop such data in the constraints of promulgating the Third Third final rule.

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Comment Number: 51-Ei-1

Docket Number: LD12-00173

Commenter: CH2M HILL

Issue: STANDARDS

Subissue: STANDARDS BASED ON INDUSTRY DATA

Comment:

V. PROPOSED STANDARDS FOR WASTEWATER AND NON-WASTEWATER

Based on actual leachate treatment data gathered, the Committee supports the establishment of one set of independent multi-source leachate treatment standards. Data was gathered over the past 9 months under EPA's oversight. During this period, the Leachate Committee has developed large amounts of data on the treatment of multi-source leachates and the residuals from both existing full-scale and bench-scale leachate treatment operations (other wastes may also be treated simultaneously). EPA has received all data developed during this study in previous submittals. However, summary tables are provided herein for the Agencies convenience.

BDAT Technology Discussion

The Committee believes the data is derived from BDAT treatment operations and should be utilized in the establishment of the treatment standards. Examples of treatment technologies utilized include: sequencing batch reactor utilizing biological treatment followed by sludge drying and stabilization, and aggressive biological treatment followed by sludge incineration. Due to the similarity of data generated, the Committee believes the sludge dryer/stabilization process represents technology technically and environmentally equivalent to incineration.

Every process had problems meeting the treatment standards for all the underlying codes as well as all of the proposed multi-source treatment standards. Examples include:

- The proposed leachate non-wastewater standards for acetone and nickel which neither dryer/stabilization or incineration technology was able to meet

- Difficulties in meeting all proposed wastewater standards experienced by both the bench scale BDAT treatment plant and the full scale sequencing batch reactor

- Numerous detection limit issues exist for every technology under both wastewaters and non-wastewaters

Cont.

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Comment Number: 51-Ei-1

Docket Number: LD12-00173

Commenter: CH2M HILL (continued)

Issue: STANDARDS

Subissue: STANDARDS BASED ON INDUSTRY DATA

Comment:

Based on the data similarities between the various technologies we recommend that all technologies be accepted as BDAT and that the BDAT treatment standards for multi-source leachate be set accordingly. A detailed description of the technologies utilized in this study can be found in previous submittals.

Comment Number: 51-Ei-1

Docket Number: LD12-00173

Commenter: CH2M Hill

Issue: Standards

Subissue: Standards Based on Industry Data

Response:

The Agency received performance data on the treatment of multi-source leachate just prior to proposal which were placed in the record for the proposed rule. These data were analyzed during the comment period and were available for reply comment. The majority of these data show no difficulty in achieving the proposed multi-source leachate standards; however, there were data for some constituents that did show difficulty in meeting the proposed standards.

When the new multi-source leachate data showed treatment using a demonstrated, available technology, and for which adequate QA/QC information was provided, they were used to calculate a revised numerical standard for promulgation in the final rule. Only those data that showed substantial treatment were considered in revising any multi-source leachate standard. Thus, the Agency is using a combination of industry leachate treatment data as well as other wastewater and nonwastewater treatment performance data in order to specify treatment standards for all BDAT List constituents in multi-source leachate. The BDAT Background Document for Multi-source Leachate contains a complete list of which treatment standards were changed based on this new data, and an explanation of why such changes were made.

Some of the data that was submitted, however, was not adequate for determining treatment standards. For example, data was received that showed non-detection values in the influent and effluent of a treatment process. Such data do not support that substantial treatment has occurred, thus they were not used to calculate revised treatment standards.

The commenter also raises the issue of detection limit problems (i.e., difficulties in reliable quantitation at detection limits near the concentration-based treatment standards). EPA acknowledges that there are certain situations where compliance with a standard cannot be demonstrated due to problems with analytical detection limits. The Agency has found that the majority of the detection limit data for organic constituents will generally not exceed the promulgated treatment standards by more than one order of magnitude. Also, there is an inherent three-fold difference in detection limits that may arise due to differences in sample size taken for analysis. The Agency, therefore, is adopting an approach for dealing with detection limit problems in the final rule. Under this approach, if an analytical sensitivity (i.e., detection limit) has been achieved within an order of magnitude of the organic constituent treatment standard, compliance with the constituent treatment standard will have been demonstrated, provided the data represents the use of a BDAT combustion process (i.e., incineration or fuel substitution in compliance with all applicable technical operating requirements under 40 CFR 264 and 265 Subpart O).

Comment Number: 51-Eii-1

Docket Number: LD12-00081

Commenter: ENVIROSAFE MANAGEMENT SERVICES, INC.

Issue: STANDARDS

Subissue: BDAT LIST CONSTITUENTS

Comment:

Page 48380, Par. A.

In the narrative for the development and identification of treatment standards, EPA makes reference to a table of proposed treatment standards for multi-source leachates. It appears by the manner in which EPA proposes this that the list contains chemical constituents in addition to those normally associated with listed hazardous waste. As was the situation in the earlier First Third proposal, we do not believe it's appropriate for EPA to propose treatment standards for waste constituents that are beyond those for which a given hazardous waste was originally listed in 40 CFR 261 Appendix VII.

Comment Number: 51-Eii-1

Docket Number: LD12-00081

Commenter: Envirosafe Management Services, Inc.

Issue: Standards

Subissue: BDAT List Constituents

Response:

The list of BDAT constituents was developed for the BDAT program in 1986 and revised in 1989. This list is made up of all those analyzable constituents that the Agency has determined are hazardous. This includes those constituents in Appendix VII and Appendix VIII as well as other constituents identified as hazardous and found to be present in various F and K wastes. The Agency believes that specifying a multi-source leachate standard for all of the constituents on the BDAT List is appropriate, since any of these constituents may have been present in the underlying wastes generating the multi-source leachate.

The Agency acknowledges that another approach for regulating multi-source leachate would be to composite the constituents develop indicator compounds for each treatability group as has been done for other listed wastes. Much analytical work is necessary, however, to develop such indicator parameters, and it would take a great amount of time to categorize the constituents on the BDAT List into groupings and make such determinations. The Agency has neither the time nor the resources within the constraints of promulgating the Third Third final rule to accomplish such an ambitious undertaking.

Comment Number: 51-Eiii-1

Docket Number: LD12-00113

Commenter: MICHIGAN DISPOSAL, INC.

Issue: STANDARDS

Subissue: TSD-SPECIFIC MULTI-SOURCE LEACHATE STANDARDS

Comment:

Since the number of facilities generating leachate is limited and each situation unique, a third option for establishing leachate treatment standards should be considered:

> c) TSD Specific Standards: Leachate analysis and management would included as permit conditions of the individual TSD facility. Frequency and number of indicator parameters should be left to the discretion of the permit writer and thereby tailored to site specific wastes, conditions and concerns.

Such an approach recognizes the need to fit the testing and treatment of leachate to the character and degree of hazard from contaminants found at each specific TSD facility. It further provides the Agency maximum flexibility in revision of the individual TSD leachate testing/treatment program to fit new concerns about each site as they emerge. BDAT concentration levels for a limited set of indicator parameters would be selected from listed waste standards previously established by the Land Disposal Restrictions.

Comment Number: 51-Eiii-1

Docket Number: LD12-00113

Commenter: Michigan Disposal, Inc.

Issue: Standards

Subissue: TSD-Specific Multi-source Leachate Standards

Response:

The Agency agrees with the spirit of this comment in that many of the determinations for regulating multi-source leachate are best made on a site-specific basis. An implementation scheme has thus been established in the final rule whereby the permit writer may determine the constituents requiring analysis and may specify the frequency of monitoring compliance. The Agency does not agree, however, that determinations of treatment of multi-source leachate is such a site-specific determination. The Agency, therefore, is promulgating a separate set of wastewater and nonwastewater treatment standards that will be used by the permit writer to regulate the land disposal of multi-source leachate and its residuals at a TSD facility.

Comment Number: 51-E(iii)-2

Docket Number: LD12-00130

Commenter: WAYNE DISPOSAL, INC.

Issue: STANDARDS

Subissue: TSD-SPECIFIC MULTI-SOURCE LEACHATE STANDARDS

Comment:

Since the number of facilities generating leachate is limited and each situation unique, a third option for establishing leachate treatment standards should be considered:

c) TSD Specific Standards: Leachate analysis and management would included as permit conditions of the individual TSD facility. Frequency and number of indicator parameters should be left to the discretion of the permit writer and thereby tailored to site specific wastes, conditions and concerns.

Such an approach recognizes the need to fit the testing and treatment of leachate to the character and degree of hazard from contaminants found at each specific TSD facility. It further provides the Agency maximum flexibility in revision of the individual TSD leachate testing/treatment program to fit new concerns about each site as they emerge. BDAT concentration levels for a limited set of indicator parameters would be selected from listed waste standards previously established by the Land Disposal Restrictions.

Comment Number: 51-Eiii-2

Docket Number: LD12-00130

Commenter: Wayne Disposal, Inc.

Issue: Standards

Subissue: TSD-Specific Multi-source Leachate Standards

Response:

The Agency agrees with the spirit of this comment in that many of the determinations for regulating multi-source leachate are best made on a site-specific basis. An implementation scheme has thus been established in the final rule whereby the permit writer may determine the constituents requiring analysis and may specify the frequency of monitoring compliance. The Agency does not agree, however, that determinations of treatment of multi-source leachate is such a site-specific determination. The Agency, therefore, is promulgating a separate set of wastewater and nonwastewater treatment standards that will be used by the permit writer to regulate the land disposal of multi-source leachate and its residuals at a TSD facility.

Comment Number: 51-E iv-1

Docket Number: LD 12-00128

Commenter: VULCAN MATERIALS COMPANY

Issue: STANDARDS

Subissue: LEACHATE TREATMENT STANDARDS BASED ON TREATABILITY GROUP

Comment:

In fact, EPA should seriously consider establishing leachate treatment standards based on treatability groups. Thus, there would be single-source leachates, multi-source leachates and treatability group leachates [e.g. halogenated aliphatic leachates]. Actually, similar treatability group leachates could be co-treated without the necessity of classifying this activity as the treatment of multi-source leachates.

As noted by EPA that the establishment of a single non-wastewater and wastewater standards for multi-source leachates could increase the analytical burden on those facilities land disposing of only a few waste codes [p.48463], the same statement would apply to facilities treating only a few treatability groups. It should not be required that a facility treating hazardous wastes from one or two treatability groups monitor or analyze for all BDAT list constituents, which number over 200 chemicals.

Comment Number: 51-Eiv-1

Docket Number: LD12-00128

Commenter: Vulcan Materials Company

Issue: Standards

Subissue: Leachate Treatment Standards Based on Treatability Group

Response:

The Agency is not promulgating multi-source leachate standards based on treatability groups since this option would be difficult to implement. The Agency does not have the time or resources available to clarify and standardize all possible treatability groups within the Third Third timeframe. In addition, the Agency feels that permit writers will have enough flexibility to determine on a case-by-case basis the analytical requirements for a facility because they will be allowed maximum flexibility to determine the constituents requiring analysis and to determine the frequency of monitoring. In this way a facility that treats leachate from only one treatability group can be regulated such that excessive sampling and analysis is not required.

Comment Number: 51-E iv-2

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY

Issue: STANDARDS

Subissue: LEACHATE TREATMENT STANDARDS BASED ON TREATABILITY GROUP

Comment:

B. EPA's speculation that leachate from a single treatability group is likely to be more dilute than leachate from multiple wastes is technically unsupportable, and is not a satisfactory basis for regulating leachate by treatability groups.

EPA states in the preamble that it believes that leachate from wastes within a single treatability group would be more treatable than multi-source leachate because such single group leachates would be more dilute. GCA knows of no data to support such a contention. The strength of a leachate (in terms of concentrations of organics and/or metals) is not closely related to whether or not the origin of the leachate is from single or multiple treatability groupings. Leachate concentrations are a function of the volume of the water leaching the waste or waste mixture, the concentrations of hazardous constituents in the waste and/or mixture, and the leaching characteristics of the waste matrix. In fact, it is entirely possible that a mixture of wastes from multiple sources will be *more* dilute in terms of specific hazardous constituents than a single treatability group of wastes. Constituents that are present in only one waste in a mixture of wastes will be diluted by the other wastes. Not all wastes in a multi-source mixture will contain the same constituents and thus the volume of any given waste treatability group in the landfill will be diluted, and will therefore generate more dilute leachate with respect to the concentration of a given constituent, as compared to a landfill containing waste from a single treatability group. There is no technical support to justify the Agency's position that leachate from a single treatability group will be more dilute than multi-source leachate.

Comment Number: 51-Eiv- 2

Docket Number: LD12-00151

Commenter: Gulf Coast Waste Disposal Authority

Issue: Standards

Subissue: Leachate Treatment Standards Based on Treatability Group

Response:

The Agency is not promulgating multi-source leachate standards based on treatability groups since this option would be difficult to implement. The Agency does not have the time or resources available to clarify and standardize all possible treatability groups within the Third Third timeframe. In addition, the Agency feels that permit writers will have enough flexibility to determine on a case-by-case basis the analytical requirements for a facility because they will be allowed maximum flexibility to determine the constituents requiring analysis and to determine the frequency of monitoring. In this way a facility that treats leachate from only one treatability group can be regulated such that excessive sampling and analysis is not required.

Comment Number: 51-EV-1

Docket Number: LD12-00173

Commenter: CH2M HILL

Issue: STANDARDS

Subissue: MULTI-SOURCE LEACHATE REGULATED AS A CHARACTERISTIC WASTE

Comment:

Multi-Source Leachate That Exhibits a Characteristic

Under the option of one set of wastewater and non-wastewater standards, the Agency is not proposing separate standards for leachate that exhibits a characteristic of hazardous waste; separate standards are not needed because the basic treatment standards will address all of the constituents and properties that the treatment standard for characteristics would address. As stated in Section III. the Committee strongly believes that this option is the correct approach. The fact that one set of wastewater and non-wastewater standards obviates the additional complications pertaining to exhibiting a characteristic provides a further reason for selecting this approach.

Comment Number: 51-Ev-1

Docket Number: LD12-00173

Commenter: CH2M Hill

Issue: Standards

Subissue: Multi-source Leachate Regulated as a Characteristic Waste

Response:

EPA is not promulgating separate treatment standards for multi-source leachate that exhibits a characteristic of hazardous wastes. By promulgating standards for all of the BDAT list constituents, all of the constituents and properties that define any characteristic will be addressed. This is consistent with the Agency's resolution of situations where prohibited listed wastes also exhibit a characteristic: the specific treatment standard for the listed waste controls because it is more specific, and in the case of the standard for multi-source leachate, addresses the constituent that causes the waste to exhibit the characteristic. Should multi-source leachate or its treatment residues exhibit a characteristic at the point of disposal (a remote possibility at best), however, it must be treated to meet the treatment standard for that characteristic. The Agency points out that if multi-source leachate is not derived from a listed waste, but simply exhibits a characteristic of hazardous waste, it is only subject to the treatment standard for that characteristic.

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Comment Number: 51-EV-2

Docket Number: LD12-00207

Commenter: RHÔNE - POULENC INC.

Issue: STANDARDS

Subissue: MULTI-SOURCE LEACHATE REGULATED AS A CHARACTERISTIC

Comment:

B. MULTI-SOURCE LEACHATE

EPA's view of multi-source leachate should be broadened to recognize their unique, often untraceable nature.

EPA proposes two options for dealing with multi-source leachates. The first option would require the appropriate treatment standard to be applied for each waste present and producing leachate. The second option would require that a fixed list of treatment standards would be applied to all multi-source leachates regardless of origin.

While both options, at first blush, appear to address the concern over multi-source leachate they are actually extreme opposites of the logical spectrum. One presumes great knowledge as to source and the other presumes no knowledge as to source. However, by focusing on constituents instead of the whole, both presume that constituent information will lead to the appropriate technology or treatment standard. Unfortunately, the real world tells us that leachates are highly variable and contain many constituents (we believe EPA concurs with this assertion since they propose such an exhaustive list of constituents and technologies). Thus, following EPA's thinking, each constituent leads to the appropriate technology; the appropriate technology is therefore, every technology. There is no system which employs every technology mandating a regulatory schedule for which there is no practical system available.

Additional problems surround the proposal. It is conceivable that separate treatment facilities would be required for manufacturing process streams and leachate streams and that the combination of the "derived-from" and "mixture" rules could lead to waste treatment costs which bear no relation to any environmental benefit. The arbitrary manner in which leachate is treated under the proposed regulations becomes further evident in that unlisted manufacturing process waste may well contain higher concentrations of a particular contaminant, but only the leachate stream would be required to meet strict LDR treatment standards. This makes no environmental sense whatsoever and arises solely from the proposed myopic approach to regulating leachate.

Cont.

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Comment Number: 51-Ev-2

Docket Number: LD12-00207

Commenter: RHÔNE-POULENC INC. (continued)

Issue: STANDARDS

Subissue: MULTI-SOURCE LEACHATE REGULATED AS A CHARACTERISTIC WASTE

Comment:

Multi-source leachate presents a regulatory issue which is not unlike that facing the Agency in the early days of RCRA regulation. In particular, the hazardous waste spectrum facing EPA warranted a set of general classifications, and special cases. The characteristics developed by EPA (and still in the process of further development, e.g. the proposed toxicity characteristic) effectively dealt with non-specific waste sources. They ensured that all wastes (not otherwise exempt) would be regulated if they exhibited the hazardous characteristics.

EPA also exercised its authority to develop special listing for waste streams from specific manufacturing processes. It was the general characteristics, however, which has served to make the RCRA system viable and flexible to make sure issues or processes not contemplated at the time of rulemaking would be adequately addressed by the regulatory system. That is, reliance solely upon listings would render the RCRA system static and impotent to address modified processes which do not meet the listing description, or entirely new waste streams which EPA could not contemplate. In the existing system, where a listing is not applicable the RCRA characteristics operate well as the "gatekeeper" for the system.

RPI believes that this regulatory approach should be allowed to operate in the case of both multi-source leachate and multi-source contaminated groundwater (which is usually present from precipitation transport through the unsaturated zone). Simply, these streams are less like the listed streams from which they may have originated in part, and are more like a waste stream from a new source, which was not contemplated by the listings. These streams should be regulated by use of the RCRA characteristic tests (and applicable treatment standards), and not be force-fitted into the RCRA listing matrix where they do not belong.

EPA's own interpretations concerning the interplay between listed and characteristic wastes support this approach. Specifically, it is well-accepted that contaminated material encountered at a Superfund site is not presumed to be a RCRA listed hazardous waste. Instead, unless the facts demonstrate that the source of the material was RCRA-listed the waste is deemed to be non-listed, and it is compared to RCRA characteristics in order to apply the RCRA standards. The case of multi-source leachate presents precisely the same problem, and should be provided the same regulatory solution.

cont.

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Comment Number: 51-EV-2

Docket Number: LD12-00207

Commenter: RHÔNE-POULENC INC. (continued)

Issue: STANDARDS

Subissue: MULTI-SOURCE LEACHATE REGULATED AS A CHARACTERISTIC WASTE

Comment:

As a practical matter, in most instances, it will be impossible to determine the source of leachate, particularly from facilities which operated prior to RCRA. Any one constituent could be from a non-listed waste stream or a listed stream. For instance, toluene can occur from disposal of F005 spent solvent waste, U220 commercial chemical product waste, or as a component of non-listed manufacturing process waste. In fact, in certain instances, the presence of toluene in non-listed form could overwhelm its presence in listed form. Still, it will be impossible to know the source of the toluene contaminant detected in leachate.

Even if the facility in question kept scrupulous records (which were not required by law many years ago, and are not now required to be maintained beyond 3 years), the most that could be determined is that the facility received one or more waste streams. It would not be required to presume that the listed stream is the waste that is leaking, or leaking at the particular location. If the constituent in question could be present from several sources (such as toluene above), there would be no answer to the question whether the constituent is derived from the treatment of a RCRA-listed waste. The regulatory outcome is even more certain for the facility which has no pre RCRA records of past disposal. Clearly, it is incongruous for the LDR rules to work such that operators who maintained scrupulous records are placed in uncertainty as to LDR requirements, and operators who met legal requirements, but did not maintain such records, are granted the benefit that only the RCRA characteristic rules need be considered.

Opponents of applying the RCRA characteristics to multi-source leachate and contaminated groundwater may contend that the "derived-from" rule at 40 CFR §261.3(c)(2) would be violated by this approach. First, as demonstrated above, there is no violation of the rule when it cannot be determined that a listed source is present. Second, RPI believes that the existing "derived from" rule allows this flexibility. The rule specifically excludes from coverage "precipitation run-off." The RCRA regulations define "run-off" specifically to include "leachate". This would indicate an intended distinction between leachate draining directly from a generated waste (i.e. separating into liquid and solid phases), and the sub-set of leachate which is produced primarily from precipitation onto land surfaces, such as landfill leachate and contaminated groundwater.

Thus, within the existing rule, EPA could make room for this flexible approach, and address the issue in an environmentally sound manner.

cont

Comment Number: 51-EV-2

Docket Number: LD12-00207

Commenter: RHÔNE-POULENC INC. (continued)

Issue: STANDARDS

Subissue: MULTI-SOURCE LEACHATE REGULATED AS A CHARACTERISTIC WASTE

Comment:

Treatment of these streams as "derived from" the treatment of listed wastes leads to other anomalous results, which would be avoided with application of the characteristic tests. RPI and many other facilities collect landfill leachate or contaminated groundwater from clean-up projects, and treat those streams in existing wastewater treatment systems. Where the system in question does not handle any other listed streams, the treatment sludge can today be handled in accordance with RCRA de-watering and non-LDR RCRA rules. If, however, EPA takes the position that the possible presence in leachate or contaminated groundwater of a single listed source disposed of or spilled to the ground years ago renders the leachate a RCRA listed stream, its introduction into and mixture with the centralized wastewater treatment flows could render the entire treatment sludge as listed and subject to LDR requirements. Here, the layering which results from the myopic application of the rules would be acutely unreasonable. Unless EPA takes responsible action to address this issue the sludge arguably would be derived from the treatment of a mixture containing waste derived from the treatment of listed hazardous waste. This could be a fraction of a single gallon of leachate in a million gallon per day flow. Rather than de-watering the sludge for RCRA landfilling, the sludge may have to be transported for off-site incineration, at prohibitive cost. The only solution would be to install separate pre-treatment facilities for the leachate and groundwater streams, which is both uneconomic and of no environmental benefit.

This result is not only important for individual plants in industry, but is potentially important for EPA's Superfund program. Obviously, if treatment of contaminated groundwater at existing wastewater facilities would result in extraordinary costs, this could affect the choice of remedy at a site because cost-effectiveness clearly is one of the elements to be used in Superfund feasibility determinations.

We propose that EPA create a new multi-source leachate characteristic: one which accounts in gross terms a few groups of easily measured parameters (e.g. total organics, total halogenated organics, etc.). EPA should prescribe BDAT in terms of currently available technology (e.g. air stripping, activated carbon, etc.). In this manner this treated leachate could then proceed to additional treatment such as aggressive biological treatment. In essence, a BDAT treated leachate stream would be further treated as if it were a manufacturing process waste without the risk of an inadvertent unknowing LDR transgression. One additional benefit of such an approach would be the harmonization of the statutes on the issue. It would allow NPDES under the Clean Water Act and air permitting under Clean Air Act to name just two, to operate in their intended capacity without overlap by RCRA, as Congress intended under RCRA Section 1006.

Comment Number: 51-Ev-2

Docket Number: LD12-00207

Commenter: Rhone-Poulenc Inc.

Issue: Standards

Subissue: Multi-source Leachate Regulated as a Characteristic Waste

Response:

The commenter asserts that neither of the Agency's options for regulating multi-source leachate take into account real-world problems associated with such a regulation. The Agency doubts that this is the case since comments on the proposed approach reflected the opinions of many different treaters of multi-source leachate who provided almost unanimous support. While commenters pointed to specific areas of the proposed approach that they felt might create problems, no comment (with perhaps the exception of this one) disagreed entirely with EPA's approach.

The commenter states that knowledge of the constituents in such leachate is not the proper starting point for determining the appropriate technology or treatment standard. The commenter goes on to express the opinion that EPA has set up a regulatory approach whereby knowledge of each constituent leads to the appropriate technology for that constituent, therefore, 'the appropriate technology is...every technology.' The Agency disagrees that such is the result of specifying constituents for regulation in multi-source leachate. The Agency based the nonwastewater treatment standards on primarily on incineration followed by stabilization as BDAT; it based the wastewater treatment standards primarily on biological treatment or chemical precipitation as BDAT. While the Agency allows maximum flexibility in the choice of treatment technologies to use to comply with concentration-based treatment standards, this certainly does not mean that every technology is BDAT for the treatment of multi-source leachate, nor does it mean that every technology can achieve these treatment standards.

The commenter states that, as a practical matter, it is impossible to determine the source of constituents in leachate. The Agency agrees and has thus developed one set of treatment standards (wastewater and nonwastewater) for leachate, made up of the BDAT list of constituents. Under the promulgated approach it is not necessary to determine the source of the hazardous constituent in order to determine the appropriate treatment standard (as was necessary under the waste code carry-through approach for regulating derived-from wastes such as leachate).

The commenter seeks to revisit the 1980 RCRA regulatory framework that established a means to determine if a waste was hazardous based on certain characteristics and that established a means of specifying certain industrial process waste streams as 'listed' hazardous waste. The commenter takes particular exception to the derived-from rule. The Agency points out, however, that the derived-from rule is not open for consideration in this rulemaking.

The commenter goes on to assert that multi-source leachate from landfills is produced primarily from precipitation onto land surfaces, and is therefore excluded from regulation because it is 'precipitation run-off'. Once again, the Agency disagrees. The 1980 preamble states that leachate produced by percolation through a waste is hazardous by virtue of the derived-from rule (45 FR 33096; May 19, 1980). This specifically includes landfill leachate. Only if the commenter can prove that run-off did not percolate through hazardous waste would the run-off not automatically be a hazardous waste.

The commenter suggests that the only appropriate way to regulate leachate is by determining if it displays any of the characteristics of hazardous wastes. The Agency disagrees and believes that the promulgated approach takes into consideration the regulation of multi-source leachate derived all types of hazardous wastes. The data that were generated by the Leachate Committee is in most cases based on treatment of multi-source leachate generated from landfills that have accepted listed wastes. The Agency states in the final rule, however, that in the event that multi-source leachate is not derived from a listed waste, but simply exhibits a characteristic of hazardous waste, it is only subject to the treatment standard for that characteristic.

Furthermore, the Agency believes that the promulgated approach, which avoids the problems associated with the waste code carry-through (discussed in the preamble and elsewhere in this respone to comments document), eliminates many of the commenter's concerns. Under the promulgated approach, the permit writer is given maximum flexibility to determine the constituents in multi-source leachate that should be analyzed. This limited universe of constituents would have to be treated to meet only one set (wastewater or nonwastewater) of treatment standards, and these standards can be met by use of any treatment technology (that is not classified as impermissible dilution).

The commenter suggests that the Agency develop a new multi-source leachate characteristic that accounts for a few easily measured parameters. The Agency has no data upon which to even begin such a determination (noting that the commenter provided nothing more that a highly generalized suggestion) and, furthermore, has no reason to believe that such an approach would satisfy its RCRA section 3004(m) mandate. Additionally, the determination of any new characteristic is outside the scope of the land disposal restrictions program, the starting point of which is the development of treatment standards for hazardous wastes. The commenter goes on to suggest that EPA should prescribe treatment standards in terms of available technologies. The Agency disagrees because the specification of methods of treatment would trigger their use for all wastes mixed with leachate (40 CFR 268.41(b)); this is the the very problem the commenter wishes to avoid. Additionally, the attachment of required methods to multi-source leachate was was one of the primary problems that opponents of the waste code carry-through approach discussed as evidence that the Agency should establish one set of separate, uniform treatment standards for this waste. The Agency was persuaded by commenters that supported the establishment of one set of treatment standards, and is promulgating this approach in the final rule.

Comment Number: 51-EV-3

Docket Number: LD12-00214

Commenter: BROWNING-FERRIS INDUSTRIES

Issue: STANDARDS

Subissue: MULTI-SOURCE LEACHATE REGULATED AS A CHARACTERISTIC WASTE

Comment:

Finally, it should be noted here that the Agency's approach to overlapping listed and characteristic wastes would further complicate the existing waste code matching problems for multi-source leachate (as well as for soil and debris) and underscores the importance of developing a separate, uniform code for leachate.

Comment Number: 51-Ev- 3

Docket Number: LD12-00214

Commenter: Browning-Ferris Industries

Issue: Standards

Subissue: Multi-source Leachate Regulated as a Characteristic Waste

Response:

EPA is not promulgating separate treatment standards for multi-source leachate that exhibits a characteristic of hazardous wastes. By promulgating standards for all of the BDAT list constituents, all of the constituents and properties that define any characteristic will be addressed. This is consistent with the Agency's resolution of situations where prohibited listed wastes also exhibit a characteristic: the specific treatment standard for the listed waste controls because it is more specific, and in the case of the standard for multi-source leachate, addresses the constituent that causes the waste to exhibit the characteristic. Should multi-source leachate or its treatment residues exhibit a characteristic at the point of disposal (a remote possibility at best), however, it must be treated to meet the treatment standard for that characteristic. The Agency points out that if multi-source leachate is not derived from a listed waste, but simply exhibits a characteristic of hazardous waste, it is only subject to the treatment standard for that characteristic.

Comment Number: 51-Evi-1

Docket Number: LD12-00198

Commenter: DEPARTMENT OF ENERGY

Issue: STANDARDS

Subissue: MULTI-SOURCE LEACHATE STANDARDS BASED ON TECHNOLOGIES

Comment:

DOE further recommends that EPA expand Option 2 by establishing treatment standards based on selection of specified technologies over numerical standards, as DOE remains greatly concerned over the analytical burden this option as proposed would place on generators. DOE recommends an approach similar to that being proposed for lab packs. Based on the organic or inorganic nature of the leachate, treatment standards could be based on either incineration or stabilization technologies. However, DOE would further recommend that the technologies to be applied be based on the specific characteristics of the leachate. DOE recommends that EPA establish a matrix of technologies to be applied versus the chemical/physical nature of the leachate. In this manner, technologies would be applied based on the presence or absence of certain types of constituents in the leachate. Variances from the treatment standard could be applied for in those cases where the leachate cannot be treated by the specified technology.

Comment Number: 51-Evi-1

Docket Number: LD12-00198

Commenter: Department of Energy

Issue: Standards

Subissue: Multi-source Leachate Standards Based on Technologies

Response:

The Agency does not agree with the commenter that multi-source leachate standards should be based on specific treatment technologies rather than specifying numerical standards. As the Agency has clearly described in its promulgated BDAT methodology, whenever possible the Agency prefers to establish numerical treatment standards rather than setting method of treatment standards. By setting numerical standards for multi-source leachate the Agency is providing the greatest flexibility to facilities in terms of how they can meet the BDAT standards. In addition, the Agency believes that multi-source leachate is too variable to imply that a specific technology or train of treatment technologies should be used as treatment in all cases. Furthermore, designation of a group of methods for leachate treatment would necessitate use of those methods whenever leachate is mixed with other prohibited wastes (40 CFR 268.41(b)). EPA believes this would significantly hinder operating flexibility. The Agency expects that permit writers will limit analysis to constituents present or likely to be present in multi-source leachate.

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Comment Number: 51-Evii-1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY

Issue: STANDARDS

Subissue: MULTI-SOURCE LEACHATE STANDARDS SHOULD NOT BE BASED ON SCRUBBER WATER DATA

Comment:

A. GCA supports the use of properly qualified wastewater treatment data for developing BDAT standards for wastewaters. Treatment standards for wastewaters should not be based on incinerator scrubber wastewaters unless that is the source of wastewater.

GCA strongly supports EPA's preference for using wastewater treatment system data for setting BDAT standards for wastewaters, in every instance where such data are available. Use of incinerator scrubber data to establish treatment standards could require incineration of large volumes of water, since incinerator scrubber water typically contains very low concentrations of organic hazardous constituents. This is not because an incinerator is especially effective at incinerating the hazardous constituents in a wastewater; it results from the fact that incineration of the nonwastewaters (generally with TOC and TSS concentrations much greater than the 1 percent nominal cutoffs used by EPA to define nonwastewaters) that were tested by EPA is complete and that very low concentrations of these constituents carryover in the off-gases that are treated by the scrubber.

GCA does not believe that incineration represents BDAT for most wastewaters (containing less than 1 percent total organic carbon and less than 1 percent total suspended solids). Although some treaters may incinerate small volumes of wastewater containing less than 1 percent organics and suspended solids. this practice is not demonstrated technology for most wastewaters containing organics. Wastewaters containing low concentrations of organic constituents are treated using biological treatment, activated carbon adsorption, and chemical oxidation, as is evident from the Office of Water's ITD data base.

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Comment Number: 51-E vii - 1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY (continued)

Issue: STANDARDS

Subissue: MULTI-SOURCE LEACHATE STANDARDS SHOULD NOT BE BASED ON SCRUBBER WATER DATA

Comment:

B. EPA should not base any wastewater treatment standards on incinerator scrubber blowdown data, unless the only wastewater that can possibly be generated under a waste code is incinerator scrubber water, or unless the Agency has actual data for the incineration of wastewater representing that waste code, or a waste code with similar characteristics. Such data should never be used to set leachate standards.

In sections III.A.2. through III.A.6 of the preamble, EPA has proposed alternate wastewater BDAT standards that are developed from incinerator scrubber data for many waste codes. The Agency has also used incinerator scrubber blowdown as the basis for many of the wastewater standards established for first third and second third wastes. In the Background Document for wastewaters containing BDAT list constituents (LD12-S1061), EPA states that:

> "In referring specifically to wastewaters (i.e., leachates) the Agency does not consider incineration scrubber water data as representing performance of a specific wastewater treatment technology, since you would not normally incinerate a wastewater." (LD12-S1061, page 2-2)

GCA strongly supports EPA's conclusion, which is applicable to *all* hazardous wastewaters that are not generated from water scrubbing of hazardous waste incinerator off-gases, not just leachates. It is particularly inappropriate to, in effect, apply incineration standards to landfill leachates that generally have low hazardous constituent concentrations.

Many of the chemicals for which EPA has proposed scrubber water-based BDAT standards are documented to be removed to concentrations at the method detection limits by biological treatment. Data developed for the organic chemicals, plastics, and synthetic fibers (OCPSF) point source category effluent limitations guidelines (Table VII-64, EPA-440/1-87/009) document that properly designed biological treatment systems are BDAT for many organic chemicals in wastewater. Examples of such U and P Chemicals include benzene and toluene (III.A.3.b.); naphthalene, benzo(a)pyrene, benz(a)anthracene, chrysene, and fluoranthene (III.A.3.c.); and phenol, 2,4-dimethyl phenol, 4,6-dinitro-o-cresol, and 4-nitrophenol (III.A.3.d.).

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Comment Number: 51-Evii-1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY (continued)

Issue: STANDARDS

Subissue: MULTI-SOURCE LEACHATE STANDARDS SHOULD NOT BE BASED ON SCRUBBER WATER DATA

Comment:

As stated above, incineration is not BDAT for most wastewaters. EPA should not use incinerator scrubber water concentrations of hazardous constituents as the basis of BDAT constituents for *any* wastewater treatment standards, unless that scrubber water is from an incinerator that incinerates wastewater.

Comment Number: 51-Evii-1

Docket Number: LD12-00151

Commenter: Gulf Coast Waste Disposal Authority

Issue: Standards

Subissue: Multi-source Leachate Standards Should Not be Based on Scrubber Water Data

Response:

The Agency agrees with the commenter that it is preferable to use actual wastewater treatment data rather than constituent concentrations in scrubber water when applicable wastewater treatment performance data are available. The Agency is promulgating multi-source leachate wastewater standards that are based on a combination of leachate treatment performance data and other wastewater treatment performance data (not including incineration scrubber water data) that were used as a basis for the proposed regulations or were placed in the administrative docket for the proposed rule.

Comment Number: 51-E viii - 1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY

Issue: STANDARDS

Subissue: SHOULD NOT SPECIFY A METHOD OF TREATMENT FOR MULTI-SOURCE LEACHATE

Comment:

C. GCA does not support the application of treatment standards that are specified as methods of treatment to multi-source leachates.

EPA has solicited comment on whether BDAT standards for specific waste codes that are specified as methods of treatment should be applied to multi-source leachate, if the option 1 approach is adopted. This is another example of where the concept of combining individual waste code standards for a multi-source leachate is technically inappropriate.

The situation could frequently arise where one waste code has a specified treatment method, while other codes in the mixture that was land disposed have numerical BDAT standards that can be achieved with a completely different treatment train that would be more effective on the multi-source leachate than the specified method. If the specified method for a single waste code was required to be applied to the multi-source leachate, the treatment could be ineffective and redundant, since the leachate would still have to be treated to the numerical standards required by the other applicable waste codes.

This scenario shows the fallacy of EPA's option 1 for multi-source leachate regulation, which from a treatment standpoint should be applicable to all possible combinations of waste codes. The mixing of designated treatment methods with numerical standards will result in an unworkable set of BDAT standards.

Comment Number: 51-Eviii-1

Docket Number: LD12-00151

Commenter: Gulf Coast Waste Disposal Authority

Issue: Standards

Subissue: Should Not Specify a Method of Treatment for Multi-source Leachate

Response:

The Agency agrees with commenters that methods of treatment should not be set as BDAT for multi-source leachates. Due to the highly variable nature of multi-source leachate, specification of a method of treatment would severely limit TSD facilities. In addition, the BDAT method of treatment set might not be appropriate for all cases. Instead, the Agency is promulgating numerical standards for wastewater and nonwastewater forms of multi-source leachate. When the Agency sets numerical standards for a waste, the treater of that waste is not precluded from using other technologies to meet those standards, so long as the technologies do not involve impermissible dilution or land disposal.

Comment Number: 51-E viii - 2

Docket Number: LD12--00190

Commenter: UNION CARBIDE CHEMICALS AND PLASTIC COMPANY, INC

Issue: STANDARDS

Subissue: SHOULD NOT SPECIFY A METHOD OF TREATMENT FOR MULTI-SOURCE LEACHATE

Comment:

9) Miscellaneous Multi-source Leachate Issues -

UCC believes that the Agency should not specify a method of treatment for multi-source leachate (e.g. incineration for twice removed derived from leachates). Instead, waste treatment facilities which are currently being used and are designed to treat these streams should be allowed to continue to treat such multi-source streams. One UCC location currently bio-treats their multi-source leachate in MTR aboveground biotanks. The treatment is complete and the facility is in compliance with all water permit conditions. The proposed rules would require this facility to also treat the leachate with activated carbon prior to bio-treatment. A requirement that is clearly unnecessary, redundant and very expensive.

Comment Number: 51-Eviii- 2

Docket Number: LD12-00190

Commenter: Union Carbide Chemicals and Plastics Company, Inc.

Issue: Standards

Subissue: Should Not Specify a Method of Treatment for Multi-source Leachate

Response:

The Agency agrees with commenters that methods of treatment should not be set as BDAT for multi-source leachates. Due to the highly variable nature of multi-source leachate, specification of a method of treatment would severely limit TSD facilities. In addition, the BDAT method of treatment set might not be appropriate for all cases. Instead, the Agency is promulgating numerical standards for wastewater and nonwastewater forms of multi-source leachate. When the Agency sets numerical standards for a waste, the treater of that waste is not precluded from using other technologies to meet those standards, so long as the technologies do not involve impermissible dilution or land disposal.

Comment Number: 51-Eviii-3

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION

Issue: STANDARDS

Subissue: SHOULD NOT SPECIFY A METHOD OF TREATMENT FOR MULTI-SOURCE LEACHATE

Comment:

1. EPA Should Not Apply a Method of Treatment Standard for Multi-source Leachates Under Option 1.

The waste treatment facilities that are currently in use and which may treat multi-source leachate as well as other waste have generally been designed to handle the specific mix of wastes at that facility. Within the manufacturing industry, such treatment facilities often concurrently treat industrial process effluent, and so are specialized in design and operation. It makes little sense to impose method of treatment standards for multi-source leachate that would require duplicative, inappropriate, or unnecessary treatment at such facilities. The issue should not be what specific treatment is used, but rather whether such treatment will provide a degree of removal commensurate with what considers to be BDAT for such complex wastes streams.

Comment Number: 51-Eviii-3

Docket Number: LD12-L0007

Commenter: The Chemical Manufacturers Association

Issue: Standards

Subissue: Should Not Specify a Method of Treatment for Multi-source Leachate

Response:

The Agency agrees with commenters that methods of treatment should not be set as BDAT for multi-source leachates. Due to the highly variable nature of multi-source leachate, specification of a method of treatment would severely limit TSD facilities. In addition, the BDAT method of treatment set might not be appropriate for all cases. Instead, the Agency is promulgating numerical standards for wastewater and nonwastewater forms of multi-source leachate. When the Agency sets numerical standards for a waste, the treater of that waste is not precluded from using other technologies to meet those standards, so long as the technologies do not involve impermissible dilution or land disposal.

Comment Number: 51-E ix-1

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION

Issue: STANDARDS

Subissue: NONWASTEWATER STANDARDS SHOULD NOT BE BASED ON INCINERATION

Comment:

2. EPA Should Reconsider the Imposition of Incineration-Based BDAT Standards for Leachate Nonwastewaters, and Develop Different Standards for Low Organic Content Materials.

The proposed BDAT Options 1 and 2 for multi-source leachate nonwastewaters do not strike at the heart of the problem associated with the waste code carry-through principle, namely that incineration is used as the basis for developing many BDAT standards. While incineration may be BDAT for the original listed wastes, it becomes an increasingly inappropriate and wasteful standard when applied to leachate treatment residues, which are twice-removed from the original waste. Imposing incineration-based standards is also usually inappropriate for soil that has been contaminated by multi-source leachate. As EPA has recognized, incinerating such soils will present serious practical problems as CERCLA remediations and RCRA corrective action programs expand. See 54 Fed. Reg. 41,566 (October 10, 1989).

It is not sound public policy to force incineration of wastes with low levels of organic constituents when there is insufficient capacity to treat many of the original wastes that contain far higher levels of organic constituents. During the proposed two-year national capacity variance for multi-source leachate nonwastewaters, EPA should investigate alternative applicable technologies for such low-level organic wastes and develop a new treatability group for such wastes, together with new BDAT standards.

Comment Number: 51-Eix-1

Docket Number: LD12-L0007

Commenter: The Chemical Manufacturers Association

Issue: Standards

Subissue: Nonwastewater Standards Should Not be Based on Incineration

Response:

The numerical treatment standards for nonwastewaters derived from treatment of multi-source leachates are established based on technologies identified as applicable and demonstrated for wastes of this type. Many of the nonwastewater standards for organic constituents regulated in multi-source leachate are based on data collected from EPA-conducted incineration tests. Incineration has been established as BDAT for most (if not all) of the organic wastes that are the underlying sources of these leachates. Not surprisingly multi-source leachate typically contains organics in treatable levels. The Agency has data supporting that incineration treats such wastes better than other available technologies in that it usually reduces the content of organics to non-detectable levels in the incinerator ash. Furthermore, incineration is appropriate treatment of multi-source leachate nonwastewaters. Characterization data indicate that multi-source leachates nonwastewaters are typicallly generated as wastewater treatment sludges that are amenable to incineration. Finally, until EPA is able to develop de minimis concentration levels for hazardous constituents, the Agency believes it best policy, and a reasonable means of minimizing treats to human health and the environment, to require destruction of toxic organic constituents to the limits achievable by combustion technologies (55 FR 6640).

Comment Number: 51-EX-1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

B. EPA should not use the data from its recent studies of wet air oxidation, activated carbon, and PACT™ to establish any of the multi-source leachate standards for wastewaters. The data that the Agency has compiled are insufficient to show that these technologies are demonstrated and available for leachates.

In Section III.A.7.c.(2) EPA requests comments on a recent study of wet oxidation followed by PACT™ or activated carbon for removal of hazardous constituents from wastewater. The Agency states that it will consider using the data from this study for the establishment of BDAT limits for certain constituents in multi-source leachate. EPA also suggests, in other sections of the proposed rule, that the data from this study might also be used to set wastewater standards for specific listed wastes [III.A.3.d.(1), for example].

GCA has obtained the relevant study and supporting data from the record and has reviewed it. It should be noted for the record that this review was complicated by the fact that for the PACT™ tests, EPA placed only the raw data from the sample analyses in the record with no description of how these data are to be used in the BDAT analysis. In fact, the sample identification key was not included in the PACT™ data file in the record (LD12-S0811), so GCA had to use the limited sample descriptors to attempt to identify the treated effluent samples, feed samples, and various blanks and replicates.

cont.

Comment Number: 51-EX-1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

1. All of these data are from a very limited bench-scale test program, and the technology cannot meet the definitions of demonstrated and available that EPA has articulated in this and prior rulemakings.

As described in the draft onsite engineering report for this study (LD12-0810), the wet oxidation tests were conducted with a batch, 3.8-liter reactor and the PACT™ testing was done in a continuous, flow-through 2.5-liter activated sludge unit. While the EPA contractor describes the 3.8-liter reactor as a *pilot-scale* unit, this scale and design of reactor is obviously bench-scale by any reasonable definition of the term. In the case of PACT™, the system used for the study was admittedly bench-scale. For activated carbon, no treatment system was evaluated at all; the data collected were solely carbon adsorption isotherms, which are not a reliable basis for anything other than for screening whether or not carbon may be appropriate for a waste.

On page 3-3 of the Background Document for wastewaters containing BDAT list constituents (LD12-S1061), EPA states that:

> "...to be demonstrated, a technology must be employed in full-scale operation for treatment of the waste in question or a similar waste."

GCA is not suggesting that wet oxidation, activated carbon, and PACT™ are not demonstrated and available technologies for *some* wastewaters, either alone or in combination. Since this limited study did not test actual wastewaters, however, it provides results that are only useful for assessing in the broadest context whether the technology may be appropriate for further testing and ultimate implementation; the quantitative data are not useful for establishing BDAT concentration limits for any specific hazardous constituents.

cont

Comment Number: 51-EX-1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

2. The number of samples that were collected and analyzed for this study is too small to provide any confidence that the proposed system configurations are capable of long-term, satisfactory performance for treating the wastewater constituents that were studied.

For each of the two synthetic wastewater feeds tested with wet air oxidation, three treated samples were collected and analyzed (Tables 7-1 and 7-2, LD12-0810). As best can be determined from the unsummarized analytical data, the contractor analyzed three samples of PACT™ system effluent from the single wet oxidation-treated feed that was tested. Carbon adsorption isotherms were developed for two samples of each synthetic wastewater; once before and once after wet air oxidation (Tables 7-4, 7-5, 7-6, and 7-7, LD12-0810J).

This is an extremely limited data base for a technology performance assessment, and cannot be used as more than a screening study for the constituents tested. The quantitative results (effluent concentrations) cannot be used to assess such factors as the treatment process variability in response to normal operating variations such as feed characteristic changes, operating parameter variations, and other such factors that will affect performance of a full-scale system.

cont.

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Comment Number: 51-EX-1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

3. By not studying biological treatment of the wet oxidation effluents, EPA's study cannot be used to demonstrate that PACT™ is necessary to satisfactorily remove the hazardous constituents that were evaluated.

A missing element of the Agency's study is the absence of a test of conventional biological treatment performance for removing the constituents and reaction products that remain after wet air oxidation. The PACT™ process relies on simultaneous biological treatment and carbon adsorption of organic chemicals, with synergistic effects claimed as an important aspect of the process. However, in the absence of a conventional biological treatment control, there is no way to determine whether or not the PACT™ system will perform any more efficiently than a properly-designed biological system. Although PACT™ is documented to effectively augment biological treatment for some wastewaters, for the majority of wastewaters it offers no increase in treatment performance over biological treatment alone.

It appears that many of the organic constituents that are identifiable in the wet air oxidation residuals from Feed A, which was used as the PACT™ feed, are completely biodegradable without any need for carbon adsorption. For example, Table 7-1 in LD12-0810 shows that the principal hazardous constituents that are present in the PACT™ feed (wet air oxidized Feed A) are: toluene, methyl isobutyl ketone, methanol, acetone, methyl ethyl ketone, pyridine, and 2-picoline. Toluene, methyl isobutyl ketone, methanol, acetone, and methyl ethyl ketone are all known to be readily biodegradable in an acclimated system. Therefore, there is every reason to believe that the wet air oxidation unit effluent could have been treated with activated sludge to remove these chemicals just as effectively as a PACT™ system.

EPA cannot conclude, with these data, that wet air oxidation followed by PACT™ is required to treat any of the constituents that it evaluated during this study. Therefore, the results of the study are not usable to define a specific treatment technology as a BDAT standard. The best that could be done with this study is to use it to indicate that wet air oxidation followed by PACT™ may be an acceptable alternate technology to biological treatment, either alone or following wet air oxidation.

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Comment Number: 51-EX-1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

4. EPA has used the data for this study to establish some of the proposed BDAT concentration standards for wastewaters. This is inappropriate for the reasons documented above, and all such standards should be revised using the more reliable data sets in the record, or if necessary, technology transfer for similar organic chemicals.

The wet air oxidation and PACT™ data have been used by EPA's contractor to develop some of the proposed BDAT concentration standards for wastewaters [reference 10, Background Document for wastewaters containing BDAT list constituents (LD12-S1061)]. As demonstrated above, these data do not meet the criteria that the Agency has established for demonstrated and available technologies. They have justified use of these data on the basis that it is from an Agency BDAT study [page 2-3 and page 4-1, Background Document for wastewaters containing BDAT list constituents (LD12-S1061)].

The proposed standards for acetonitrile [page 4-6,Background Document for wastewaters containing BDAT list constituents (LD12-S1061)] are based on one sample representing the PACT™ data from this study. Other chemicals with proposed limits based on these PACT™ data are: methanol; methyl ethyl ketone; and 1,1,1,2-tetrachloroethane. These PACT™ data should not be considered as an acceptable treatment technology data base. Technology transfer for chemicals with similar structure having acceptable treatability data is more appropriate than use of the PACT™ data base.

EPA should revise all of the BDAT wastewater standards that are proposed to be set using the limited PACT™ data base, and should use alternate treatment data or technology transfer to set the limits for these constituents. Also, it should revise the standards for any constituents that have proposed standards based on technology transfer from the standards for these constituents.

Comment Number: 51-Ex-1

Docket Number: LD12-00151

Commenter: **Gulf Coast Waste Disposal Authority**

Issue: Standards

Subissue: **Use of WAO/PACT System Data for Multi-source Leachate Standards**

Response:

The Agency does not agree with the commenter that the WAO/PACT System data collected by EPA should not be used in establishing multi-source leachate wastewater constituent standards. For many of the constituents chosen for inclusion in the WAO and PACT System study, EPA had limited or no treatment performance data available. The purpose of the WAO/PACT System test was to examine these technologies and determine the extent of treatment by these technologies on those constituents tested.

Since the PACT System analytical results were received by the Agency just prior to proposal they were placed into the proposal docket in their original form. There was not sufficient time for the Agency to summarize these data prior to proposal, however, these data have been summarized since proposal and are presented in the Final Onsite Engineering Report of Wet Air Oxidation and PACT System Treatability Study at Zimpro/Passavant Rothschild, Wisconsin located in the Third Third Final Record.

The following seven constituents have promulgated Third Third standards based on the Agency generated WAO followed by PACT System data:

2-Sec-butyl-4,6-dinitrophenol
p-Chloroaniline
Isosafrole
Methapyrilene
Phenacetin
Pronamide
Safrole

For p-chloroaniline, phenacetin, and pronamide no other source of treatment performance data was available and therefore the demonstrated and available technologies WAO and PACT were considered best and therefore BDAT. Isosafrole, methapyrilene and safrole have no data available for them from any of the sources examined by the Agency. The standards for these constituents are therefore based on a transfer of the phenacetin data. This transfer is based on a similarity in structure between these constituents and phenacetin. 2-Sec-butyl-4,6-dinitrophenol had in addition to the WAO followed by PACT System data, WAO treatment data. Both data sets showed substantial treatment and the WAO followed by PACT System data was chosen as BDAT since a lower effluent was achievable than by WAO alone.

Standards for the organic constituents acetonitrile, methanol, methyl ethyl ketone, and 1,1,1,2-tetrachloroethane were not based on WAO and PACT System data from the Agency sponsored test, rather these data represent other WAO and PACT System data that was available at proposal and considered as treatment performance data for use in establishing BDAT. The promulgated standards for methanol and methyl ethyl ketone are changing from proposal and will now be based on biological treatment as BDAT. The standards for these constituents are being set on industry submitted leachate treatment performance data. The promulgated standards for acetonitrile and 1,1,1,2-tetrachloroethane are being based on the same data that was proposed. In the case of acetonitrile, the Agency believes the PACT data proposed represents BDAT. In addition, granular activated carbon data, also presented, substantiates that the PACT effluent values are achievable. For 1,1,1,2-tetrachloroethane, the PACT data proposed was the only treatment performance data available for this constituent and this demonstrated and available technology was therefore determined to be best and therefore BDAT.

The Agency considers the WAO test data pilot-scale and the PACT System test data bench-scale, the Agency believes and industry concurs that both these technologies are demonstrated on full-scale units for wastewaters containing similar organic constituents. In EPA's test, a synthetic wastewater feed was used. The feed used does not represent an actual leachate; however, both the Agency and industry agree that multi-source leachate is highly variable so that a test on a specific leachate by these technologies would also not represent treatment of all leachates. In addition, use of a synthetic feed has been done in other treatment tests in the past when actual waste streams were not available for testing. The Agency intentionally spiked the synthetic wastewaters in these tests at high levels of the tested constituents so that they might represent "worst case" waste streams.

Three sample sets of treated effluent data were collected for the EPA tests. These sample sets are sufficient for basing a BDAT standard, since there are no set limits on how many sample sets are required to set a standard. More extensive sampling is always preferable, though obviously not always economically feasible.

Commenters should note that setting a numerical BDAT standard based on the performance of WAO followed by PACT System data for some multi-source leachate wastewater constituents does not preclude industry from treating multi-source leachate wastewater with an alternative technology, so long as the resultant effluent meets the BDAT standards and treatment does not constitute impermissible land-disposal or dilution. Therefore, WAO followed by biological treatment is not precluded from use in these cases so long as the numerical standards are met.

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Comment Number: 51-EX-2

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

II. EPA's Study of the Treatment of Wastewaters by Wet Air Oxidation Followed by PACT or Activated Carbon Provides No Useful Quantitative Data for Establishing Treatment Standards for Constituents in Multi-source Leachate. At Best, the Limited Data Can Be Used in a Qualitative Sense, To Suggest That These Technologies Might Be a Treatment System Alternative for Some Constituents in Multi-source Leachate.

In Section III.A.7.c.(2) EPA requests comments on a recent study of wet air oxidation followed by PACT or activated carbon for removal of hazardous constituents from wastewater. The Agency states that it will consider using the data from this study for establishing BDAT limits for certain constituents in multi-source leachate. EPA also suggests, in other sections of the proposed rule, that the data from this study might also be used to set wastewater standards for specific listed wastes (see Section III.A.3.d.(1), for example).

CMA has reviewed the relevant study and supporting data from the record. Our review, however, was complicated by the fact that for the PACT tests, EPA placed only the raw data from the sample analyses in the record, with no description of how these data are to be used in the BDAT analysis. In fact, the sample identification key was not included in the PACT data file in the record (LD12-S0811), so CMA had to use the limited sample descriptors to attempt to identify the treated effluent samples, feed samples, and various blanks and replicates.

cont.

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Comment Number: 51-EX-2

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

All of These Data Are From a Very Limited Bench-scale Test Program, and the Technology Cannot Meet the Definitions of Demonstrated and Available That EPA Has Articulated in This and Prior Rulemakings.

As described in the draft on-site engineering report for this study (LD12-0810), the wet air oxidation tests were conducted with a batch, 3.8-liter reactor and the PACT testing was done in a continuous, flow-through 2.5-liter activated sludge unit. While the EPA contractor describes the 3.8-liter reactor as a "pilot-scale" unit, the scale and design of this reactor is obviously bench-scale by any reasonable definition of the term. In the case of PACT, the system used for the study was admittedly bench-scale. For activated carbon, no treatment system was evaluated at all; the data were solely carbon adsorption isotherms, which are reliable only for screening whether or not carbon may be appropriate for a waste.

On page 3-3 of the Background Document for wastewaters containing BDAT list constituents (LD12-S1061), EPA states that:

> . . .to be demonstrated, a technology must be employed in full-scale operation for treatment of the waste in question or a similar waste.

cont.

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Comment Number: 51-EX-2

Docket Number: LD12-LD007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

CMA is not suggesting that wet air oxidation, activated carbon, and PACT are not demonstrated and available technologies for some wastewaters, either alone or in combination. Since this limited study did not test actual wastewaters, however, it provides results that are only useful for assessing in the broadest manner whether the technology may be appropriate for further testing and ultimate implementation. The quantitative data are not useful for establishing BDAT concentration limits for any specific hazardous constituents.

cont.

Comment Number: 51-EX-2

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

2. **The Number of Samples That Were Collected and Analyzed for This Study Is Too Small To Provide Any Confidence That the Proposed System Configurations Are Capable of Long-term, Satisfactory Performance for Treating the Wastewater Constituents That Were Studied.**

For each of the two synthetic wastewater feeds that were tested with wet air oxidation, three treated samples were collected and analyzed (Tables 7-1 and 7-2, LD12-0810). The unsummarized analytical data suggest that the contractor analyzed three samples of PACT system effluent from the single wet air oxidation-treated feed that was tested. Carbon adsorption isotherms were developed for two samples of each synthetic wastewater; once before and once after wet air oxidation (Tables 7-4, 7-5, 7-6, and 7-7, LD12-0810J).

This is an extremely limited database for a technology performance assessment, and cannot be used as more than a screening study for the constituents that were tested. The quantitative results (effluent concentrations) cannot be used to assess such factors as the treatment process variability in response to normal operating variations such as feed characteristic changes, operating parameter variations, and other such factors that will affect performance of a full-scale system.

cont.

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Comment Number: 51-EX-2

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

1. Because EPA Did Not Study Biological Treatment of the Wet Air Oxidation Effluents, EPA's Study Cannot Be Used To Demonstrate That PACT Is Necessary To Satisfactorily Remove the Hazardous Constituents That Were Evaluated.

The Agency's study failed to test conventional biological treatment performance for removing the constituents and reaction products that remain after wet air oxidation. The PACT process relies on simultaneous biological treatment and carbon adsorption of organic chemicals, with synergistic effects claimed as an important aspect of the process. However, in the absence of a conventional biological treatment control, there is no way to determine whether the PACT system will perform more efficiently than a properly-designed conventional biological system. Although PACT is documented to augment biological treatment for some wastewaters, for the majority of wastewaters it offers no increase in treatment performance over biological treatment alone.

Many of the organic constituents identifiable in the wet air oxidation residuals from Feed A, which was used as the PACT feed, are completely biodegradable without carbon adsorption. For example, Table 7-1 in LD12-0810 shows that the principal hazardous constituents present in the PACT feed (wet air oxidized Feed A) are: toluene, methyl isobutyl ketone,

cont.

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Comment Number: 51-EX-2

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

methanol, acetone, methyl ethyl ketone, pyridine, and 2-picoline. Toluene, methyl isobutyl ketone, methanol, acetone, and methyl ethyl ketone are all readily biodegradable in an acclimated system. Therefore, there is every reason to believe ~~that~~ the wet air oxidation unit effluent could have been treated with activated sludge to remove these chemicals just as effectively as a PACT system.

EPA cannot conclude, with these data, that wet air oxidation followed by PACT is required to treat any of the constituents that it evaluated during this study. Therefore, the results of the study should not be used to define a specific treatment technology as a BDAT standard. The best that could be done with this study is to use it to indicate that wet air oxidation followed by PACT may be an acceptable alternate technology to biological treatment, either alone or following wet air oxidation.

cont.

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Comment Number: 51-EX-2

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

4. EPA Inappropriately Used the Data From This Study To Establish Some of the Proposed BDAT Concentration Standards for Wastewaters. Such Standards Should Be Revised Using the More Reliable Data Sets in the Record, or if Necessary, Technology Transfer for Similar Organic Chemicals.

The wet air oxidation and PACT data have been used by EPA's contractor to develop some of the proposed BDAT concentration standards for wastewaters (Reference 10, Background Document for wastewaters containing BDAT list constituents (LD12-S1061)). As demonstrated above, these data do not meet the Agency's own criteria for demonstrated and available technologies. Accordingly, they should not be used to set standards.

In particular, the proposed standards for acetonitrile (page 4-6,Background Document for wastewaters containing BDAT list constituents (LD12-S1061)) are based on one sample representing the PACT data from this study. Other chemicals whose proposed limits based on these PACT data are: methanol, methyl ethyl ketone, and 1,1,1,2-tetrachloroethane. These PACT data should not be considered as an acceptable treatment technology database. Technology transfer for chemicals with similar structure having acceptable treatability data is more appropriate than using the PACT database.

cont.

Comment Number: 51-EX-2

Docket Number: LD12-L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION (continued)

Issue: STANDARDS

Subissue: USE OF WAO/PACT SYSTEM DATA FOR MULTI-SOURCE LEACHATE STANDARDS

Comment:

EPA should revise all of the BDAT wastewater standards that are proposed based on the limited PACT database, and should use alternate treatment data or technology transfer to set the limits for these constituents.

Comment Number: 51-Ex- 2

Docket Number: LD12-L0007

Commenter: - The Chemical Manufacturers Association

Issue: Standards

Subissue: Use of WAO/PACT System Data for Multi-source Leachate Standards

Response:

The Agency does not agree with the commenter that the WAO/PACT System data collected by EPA should not be used in establishing multi-source leachate wastewater constituent standards. For many of the constituents chosen for inclusion in the WAO and PACT System study, EPA had limited or no treatment performance data available. The purpose of the WAO/PACT System test was to examine these technologies and determine the extent of treatment by these technologies on those constituents tested.

Since the PACT System analytical results were received by the Agency just prior to proposal they were placed into the proposal docket in their original form. There was not sufficient time for the Agency to summarize these data prior to proposal, however, these data have been summarized since proposal and are presented in the Final Onsite Engineering Report of Wet Air Oxidation and PACT System Treatability Study at Zimpro/Passavant Rothschild, Wisconsin located in the Third Third Final Record.

The following seven constituents have promulgated Third Third standards based on the Agency generated WAO followed by PACT System data:

2-Sec-butyl-4,6-dinitrophenol
p-Chloroaniline
Isosafrole
Methapyrilene
Phenacetin
Pronamide
Safrole

For p-chloroaniline, phenacetin, and pronamide no other source of treatment performance data was available and therefore the demonstrated and available technologies WAO and PACT were considered best and therefore BDAT. Isosafrole, methapyrilene and safrole have no data available for them from any of the sources examined by the Agency. The standards for these constituents are therefore based on a transfer of the phenacetin data. This transfer is based on a similarity in structure between these constituents and phenacetin. 2-Sec-butyl-4,6-dinitrophenol had in addition to the WAO followed by PACT System data, WAO treatment data. Both data sets showed substantial treatment and the WAO followed by PACT System data was chosen as BDAT since a lower effluent was achievable than by WAO alone.

Standards for the organic constituents acetonitrile, methanol, methyl ethyl ketone, and 1,1,1,2-tetrachloroethane were not based on WAO and PACT System data from the Agency sponsored test, rather these data represent other WAO and PACT System data that was available at proposal and considered as treatment performance data for use in establishing BDAT. The promulgated standards for methanol and methyl ethyl ketone are changing from proposal and will now be based on biological treatment as BDAT. The standards for these constituents are being set on industry submitted leachate treatment performance data. The promulgated standards for acetonitrile and 1,1,1,2-tetrachloroethane are being based on the same data that was proposed. In the case of acetonitrile, the Agency believes the PACT data proposed represents BDAT. In addition, granular activated carbon data, also presented, substantiates that the PACT effluent values are achievable. For 1,1,1,2-tetrachloroethane, the PACT data proposed was the only treatment performance data available for this constituent and this demonstrated and available technology was therefore determined to be best and therefore BDAT.

The Agency considers the WAO test data pilot-scale and the PACT System test data bench-scale, the Agency believes and industry concurs that both these technologies are demonstrated on full-scale units for wastewaters containing similar organic constituents. In EPA's test, a synthetic wastewater feed was used. The feed used does not represent an actual leachate; however, both the Agency and industry agree that multi-source leachate is highly variable so that a test on a specific leachate by these technologies would also not represent treatment of all leachates. In addition, use of a synthetic feed has been done in other treatment tests in the past when actual waste streams were not available for testing. The Agency intentionally spiked the synthetic wastewaters in these tests at high levels of the tested constituents so that they might represent "worst case" waste streams.

Three sample sets of treated effluent data were collected for the EPA tests. These sample sets are sufficient for basing a BDAT standard, since there are no set limits on how many sample sets are required to set a standard. More extensive sampling is always preferable, though obviously not always economically feasible.

Commenters should note that setting a numerical BDAT standard based on the performance of WAO followed by PACT System data for some multi-source leachate wastewater constituents does not preclude industry from treating multi-source leachate wastewater with an alternative technology, so long as the resultant effluent meets the BDAT standards and treatment does not constitute impermissible land-disposal or dilution. Therefore, WAO followed by biological treatment is not precluded from use in these cases so long as the numerical standards are met.

Comment Number: 51-Exi-1

Docket Number: LD12-00187

Commenter: METAL CATALYSTS PRODUCERS

Issue: STANDARDS

Subissue: HIGHER STANDARD FOR NICKEL

Comment:

5. EPA Should Revise The Treatment Standard For Nickel In Multi-Source Leachate Nonwastewaters.

EPA proposes as "Option 2" that multi-source leachate would have to be treated prior to land disposal and meet specific concentration levels for over two hundred constituents. For example, the proposed treatment standard for a nonwastewater multi-source leachate waste that contains nickel is 0.32 mg/l. See 54 Fed. Reg. at 48,466. This proposed standard for nickel is of particular concern to the Panel.

The reference EPA gives for the nickel treatment standard is the standard for barium. See 54 Fed. Reg. at 48,469/1. The Panel's review of the barium standard, however, indicates no mention of nickel. Moreover, the Panel believes that technology transfer is inappropriate for two constituents as different as barium and nickel, particularly in highly variable multi-source leachate matrices. The proposed nickel treatment standard of 0.32 mg/l appears not only to be inappropriate, but also well below levels that are necessary to minimize threats -- the statutory standard in RCRA § 3004(m). EPA should increase the treatment level accordingly.

Comment Number: 51-Exi-1

Docket Number: LD12-00187

Commenter: Metal Catalysts Producers

Issue: Standards

Subissue: Higher Standard for Nickel

Response:

It was an error that the reference for the nickel nonwastewater standard in multi-source leachate was barium. The standard of 0.32 mg/l for nickel was transferred to multi-source leachate from the stabilization treatment of nickel in F006 wastes (promulgated on August 17, 1988). In the development of F006 standards, nickel was substantially treated from as high as 730 mg/l to 0.04 mg/l. Nine data points were used in the development of this standard. (See BDAT Background Document for F006 EPA/530-SW-88-0009-1; May, 1988.) The Agency does not agree with the commenter that the treatment standard is inappropriate or below levels necessary to minimize threats since this standard was also promulgated for nickel in F007, F008, F009, K101, K102, and K061 nonwastewaters. Furthermore, the fact that multi-source leachate can be highly variable was taken into account in the transfer of this standard.

Additionally, it should be noted that treatment standards for nickel in F024 and K048-K052 nonwastewaters, possibly less complex matrices, are being promulgated in the Third Third rulemaking at much lower levels than 0.32 mg/l.

Comment Number: 51-Fi-1

Docket Number: LD12-00081

Commenter: ENVIROSAFE MANAGEMENT SERVICES, INC.

Issue: PERMITTING

Subissue: PROMULGATE UNDER HSWA AS A MINOR PERMIT MODIFICATION

Comment:

Therefore, we totally support the idea of a multi-source leachate single waste code and encourage its use as a HSWA amendment that would be incumbent upon all states whether authorized or not.

Comment Number: 51-Fi-1

Docket Number: LD12-00081

Commenter: Envirosafe Management Services, Inc.

Issue: Permitting

Subissue: Promulgate Under HSWA as a Minor Permit Modification

Response:

It would appear that listing multi-source leachate by a separate waste code necessitates amending many RCRA permits that do not already include a narrative description for multi-source leachate and multi-source leachate treatment residues. In addition, the designation of multi-source leachate as a single waste code may require some modification to existing permits in order to treat, store, or dispose of the new waste code. Commenters requested that such permit modifications be considered a Class 1, or minor permit modification and that it be considered a HSWA regulation immediately effective in authorized states. EPA agrees that such modifications are appropriately achieved through the procedures in 40 CFR 270.42(g). These procedures require the submission of a Class 1 modification by the date on which the waste becomes subject to the new requirement (August 8, 1990). The regulations further specify a subsequent submission of a Class 1 or Class 3 permit modification request, if appropriate. EPA believes that a Class 1 submission is all that is required when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes that heretofore were carried-through to the leachate. If a facility wants to make additional operation changes or introduce the leachate into units not previously permitted to manage the waste, then the appropriate modification procedures would apply before the activity can commence.

Comment Number: 51-Fi-2

Docket Number: LD12-00138

Commenter: OCCIDENTAL CHEMICAL CORPORATION

Issue: PERMITTING

Subissue: PROMULGATE UNDER HSWA AS A MINOR PERMIT MODIFICATION

Comment:

The incorporation of a single waste code in the permits of facilities that are already managing multi-source leachates should be made effective in all states under HSWA. This is necessary because of the different state permit modification situations. Many of the permitting issues are associated with incinerable solids derived from multi-source leachates. To avoid the confusion associated with introducing new waste codes into incinerators, and the differences in minor permit modification provisions, the new codes should become effective immediately under HSWA in all states as a minor permit modification, without consent of the Agency.

Comment Number: 51-Fi- 2

Docket Number: LD12-00138

Commenter: Occidental Chemical Corporation

Issue: Permitting

Subissue: Promulgate Under HSWA as a Minor Permit Modification

Response:

It would appear that listing multi-source leachate by a separate waste code necessitates amending many RCRA permits that do not already include a narrative description for multi-source leachate and multi-source leachate treatment residues. In addition, the designation of multi-source leachate as a single waste code may require some modification to existing permits in order to treat, store, or dispose of the new waste code. Commenters requested that such permit modifications be considered a Class 1, or minor permit modification and that it be considered a HSWA regulation immediately effective in authorized states. EPA agrees that such modifications are appropriately achieved through the procedures in 40 CFR 270.42(g). These procedures require the submission of a Class 1 modification by the date on which the waste becomes subject to the new requirement (August 8, 1990). The regulations further specify a subsequent submission of a Class 1 or Class 3 permit modification request, if appropriate. EPA believes that a Class 1 submission is all that is required when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes that heretofore were carried-through to the leachate. If a facility wants to make additional operation changes or introduce the leachate into units not previously permitted to manage the waste, then the appropriate modification procedures would apply before the activity can commence.

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__Comment Number__: 51-Fi-'3

__Docket Number__: LD12-00157

__Commenter__: ASSOCIATION OF STATE & TERRITORIAL SOLID WASTE MANAGEMENT OFFICIALS

__Issue__: PERMITTING

__Subissue__: PROMULGATE UNDER HSWA AS A MINOR PERMIT MODIFICATION

__Comment__:

The Task Force does have some concerns, however, regarding the implementation and enforcement of this proposed option. A reading of the preamble and proposed rule suggests that USEPA assumes that the generator of such wastes will have a proper waste analysis plan which will be reviewed and approved as part of some permit process by a permit writer. In practice, many sources of this leachate will be unregulated (e.g., sites subject to CERCLA) or unpermitted (e.g., closed interim status RCRA facilities, voluntary cleanups, 90-day accumulation facilities, etc.), and the leachate will not be managed on-site. Therefore it will be necessary for the Part B permits to be modified (i.e., at the receiving facility) to insure that the waste has been properly identified and is being properly sampled and analyzed before and after treatment.

It is our understanding, from the preamble, that the permit writer would have the discretion of specifying not only the frequency of analysis of such wastes, but the individual constituents as well. This being the case, it would not be necessary for USEPA to develop a narrower definition to deal with leachate derived exclusively from wastes within a single treatability group as suggested at 54 FR 48462. For example, if the leachate were only derived from wastes in the K048-052 series, the permit writer could specify only those related constituents in the permit, if he so chooses.

Cont,

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Comment Number: 51-Fi-3

Docket Number: LD12-00157

Commenter: ASSOCIATION OF STATE AND TERRITORIAL SOLID WASTE MANAGEMENT OFFICIALS (Cont.)

Issue: PERMITTING

Subissue: PROMULGATE UNDER HSWA AS A MINOR PERMIT MODIFICATION

Comment:

The Task Force also suggests that permit changes to incorporate these wastes and their analyses be Class I modifications subject to State or USEPA prior approval.

Comment Number: 51-Fi-3

Docket Number: LD12-00157

Commenter: Association of State & Territorial Solid Waste Management Officials

Issue: Permitting

Subissue: Promulgate Under HSWA as a Minor Permit Modification

Response:

It would appear that listing multi-source leachate by a separate waste code necessitates amending many RCRA permits that do not already include a narrative description for multi-source leachate and multi-source leachate treatment residues. In addition, the designation of multi-source leachate as a single waste code may require some modification to existing permits in order to treat, store, or dispose of the new waste code. Commenters requested that such permit modifications be considered a Class 1, or minor permit modification and that it be considered a HSWA regulation immediately effective in authorized states. EPA agrees that such modifications are appropriately achieved through the procedures in 40 CFR 270.42(g). These procedures require the submission of a Class 1 modification by the date on which the waste becomes subject to the new requirement (August 8, 1990). The regulations further specify a subsequent submission of a Class 1 or Class 3 permit modification request, if appropriate. EPA believes that a Class 1 submission is all that is required when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes that heretofore were carried-through to the leachate. If a facility wants to make additional operation changes or introduce the leachate into units not previously permitted to manage the waste, then the appropriate modification procedures would apply before the activity can commence.

Comment Number: 51-Fi-4

Docket Number: LD12-00159

Commenter: WASTE MANAGEMENT INC.

Issue: PERMITTING

Subissue: PROMULGATE UNDER HSWA AS A MINOR PERMIT MODIFICATION

Comment:

D. EPA's Solution Must Be A HSWA Provision.

Whether EPA chooses Option 2 with the proposed exception to the derived-from rule for dioxin wastes or Option 2 with a separate waste code for multi-source leachate, the Agency's choice must be immediately applicable in all states or application of the land ban to multi-source leachate will cause the RCRA program to founder. TSD facilities in authorized states will be unable to manage their leachate in compliance with the land ban unless all aspects of the Agency's leachate management scheme are immediately effective.

Comment Number: 51-Fi-4

Docket Number: LD12-00159

Commenter: Waste Management Inc.

Issue: Permitting

Subissue: **Promulgate Under HSWA as a Minor Permit Modification**

Response:

It would appear that listing multi-source leachate by a separate waste code necessitates amending many RCRA permits that do not already include a narrative description for multi-source leachate and multi-source leachate treatment residues. In addition, the designation of multi-source leachate as a single waste code may require some modification to existing permits in order to treat, store, or dispose of the new waste code. Commenters requested that such permit modifications be considered a Class 1, or minor permit modification and that it be considered a HSWA regulation immediately effective in authorized states. EPA agrees that such modifications are appropriately achieved through the procedures in 40 CFR 270.42(g). These procedures require the submission of a Class 1 modification by the date on which the waste becomes subject to the new requirement (August 8, 1990). The regulations further specify a subsequent submission of a Class 1 or Class 3 permit modification request, if appropriate. EPA believes that a Class 1 submission is all that is required when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes that heretofore were carried-through to the leachate. If a facility wants to make additional operation changes or introduce the leachate into units not previously permitted to manage the waste, then the appropriate modification procedures would apply before the activity can commence.

Comment Number: 51-Fi-5

Docket Number: LD12-00173

Commenter: CH2M HILL

Issue: PERMITTING

Subissue: PROMULGATE UNDER HSWA AS A MINOR PERMIT MODIFICATION

Comment:

Effects on Permitting

Section II has an extensive discussion arguing strongly on the need for a separate waste code for multi-source leachate. Our comments here are in response to EPA's request (at 54 Fed Reg 48465) for comments on whether a single waste code should be considered a HSWA regulation immediately effective in authorized states.

If the waste code carry-through principle is applied to multi-source leachate, every facility handling the leachate, or any residue thereof, must, in many states, be permitted to handle every waste code from which the leachate derives. Many treatment facilities that are suitable for treating multi-source leachate or its residues are not suitable for treatment the wastes from which the leachate derives and, consequently, their permits do not contain the necessary "endless array" of waste codes. Moreover, permit writers may be reluctant to add codes for wastes that should not be treated at a particular facility merely to enable the facility to handle leachate that theoretically "contains" those wastes.

The Agency's regulation must be immediately applicable in all states or application of the land ban to leachate will cause the RCRA program to founder. TSD facilities in authorized states will be unable to manage their leachate in compliance with the land ban unless all aspects of the Agency's leachate management scheme are immediately effective. For example, no facilities are currently permitted to treat dioxin waste codes; any leachate bearing those codes will be unmanageable unless each state is subject to EPA's solution to this problem. Any landfill that is unable to manage its leachate lawfully will be forced to close. Thus, the RCRA system itself will suffer a crippling loss of capacity.

In summary, the immediate effectiveness in all states of whatever solution EPA adopts is essential to the smooth functioning of the land ban program and, therefore, squarely within EPA's HSWA authority.

Comment Number: 51-Fi-5

Docket Number: LD12-00173

Commenter: CH2M Hill

Issue: Permitting

Subissue: Promulgate Under HSWA as a Minor Permit Modification

Response:

It would appear that listing multi-source leachate by a separate waste code necessitates amending many RCRA permits that do not already include a narrative description for multi-source leachate and multi-source leachate treatment residues. In addition, the designation of multi-source leachate as a single waste code may require some modification to existing permits in order to treat, store, or dispose of the new waste code. Commenters requested that such permit modifications be considered a Class 1, or minor permit modification and that it be considered a HSWA regulation immediately effective in authorized states. EPA agrees that such modifications are appropriately achieved through the procedures in 40 CFR 270.42(g). These procedures require the submission of a Class 1 modification by the date on which the waste becomes subject to the new requirement (August 8, 1990). The regulations further specify a subsequent submission of a Class 1 or Class 3 permit modification request, if appropriate. EPA believes that a Class 1 submission is all that is required when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes that heretofore were carried-through to the leachate. If a facility wants to make additional operation changes or introduce the leachate into units not previously permitted to manage the waste, then the appropriate modification procedures would apply before the activity can commence.

Comment Number: 51-Fi-6

Docket Number: LD12-00190

Commenter: UNION CARBIDE CHEMICALS AND PLASTIC COMPANY, INC.

Issue: PERMITTING

Subissue: PROMULGATE UNDER HSWA AS A MINOR PERMIT MODIFICATION

Comment:

UCC supports a new waste code for multi-source leachates. It would be very helpful if a permit could be modified once to cover all multi-source leachates. UCC believes the Agency should promulgate this new waste code pursuant to HSWA provisions of RCRA so that it would become effective in all states at the same time. This is necessary because of the different state permit modification requirements (minor vs major) for such things as tanks, incinerators, etc.

Comment Number: 51-Fi-6

Docket Number: LD12-00190

Commenter: Union Carbide Chemicals and Plastic Commpany, Inc.

Issue: Permitting

Subissue: Promulgate Under HSWA as a Minor Permit Modification

Response:

It would appear that listing multi-source leachate by a separate waste code necessitates amending many RCRA permits that do not already include a narrative description for multi-source leachate and multi-source leachate treatment residues. In addition, the designation of multi-source leachate as a single waste code may require some modification to existing permits in order to treat, store, or dispose of the new waste code. Commenters requested that such permit modifications be considered a Class 1, or minor permit modification and that it be considered a HSWA regulation immediately effective in authorized states. EPA agrees that such modifications are appropriately achieved through the procedures in 40 CFR 270.42(g). These procedures require the submission of a Class 1 modification by the date on which the waste becomes subject to the new requirement (August 8, 1990). The regulations further specify a subsequent submission of a Class 1 or Class 3 permit modification request, if appropriate. EPA believes that a Class 1 submission is all that is required when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes that heretofore were carried-through to the leachate. If a facility wants to make additional operation changes or introduce the leachate into units not previously permitted to manage the waste, then the appropriate modification procedures would apply before the activity can commence.

Comment Number: 51-Fi-7

Docket Number: LD12- 00214

Commenter: BROWNING-FERRIS INDUSTRIES

Issue: PERMITTING

Subissue: PROMULGATE UNDER HSWA AS A MINOR PERMIT MODIFICATION

Comment:

BFI has previously submitted comments to the Agency that support making the new waste code immediately effective in all States under HSWA.[11] Without repeating those comments in detail here, BFI would note that the "minor permit modification" procedures adopted by the Agency were not adopted pursuant to HSWA, and there remains extensive variation among the States in their permitting procedures. Unless the waste code matching problems created by the "waste code carry through" principle are resolved for leachate, the treatment objectives of the land ban restrictions will be frustrated. This amply justifies promulgation of the rule as a HSWA rule, immediately effective in the States. The Agency should thus specify a new waste code for multi-source leachate and establish, as a HSWA rule, that the new code can be incorporated in a permit as a minor permit modification, without the prior approval of the Agency.

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[11] Comments submitted by BFI dated Nov. 17, 1988, docket number FY-87-RIPP-FFFF. We request these comments by incorporated by reference herein.

Comment Number: 51-Fi- 7

Docket Number: LD12-00214

Commenter: Browning-Ferris Industries

Issue: Permitting

Subissue: **Promulgate Under HSWA as a Minor Permit Modification**

Response:

It would appear that listing multi-source leachate by a separate waste code necessitates amending many RCRA permits that do not already include a narrative description for multi-source leachate and multi-source leachate treatment residues. In addition, the designation of multi-source leachate as a single waste code may require some modification to existing permits in order to treat, store, or dispose of the new waste code. Commenters requested that such permit modifications be considered a Class 1, or minor permit modification and that it be considered a HSWA regulation immediately effective in authorized states. EPA agrees that such modifications are appropriately achieved through the procedures in 40 CFR 270.42(g). These procedures require the submission of a Class 1 modification by the date on which the waste becomes subject to the new requirement (August 8, 1990). The regulations further specify a subsequent submission of a Class 1 or Class 3 permit modification request, if appropriate. EPA believes that a Class 1 submission is all that is required when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes that heretofore were carried-through to the leachate. If a facility wants to make additional operation changes or introduce the leachate into units not previously permitted to manage the waste, then the appropriate modification procedures would apply before the activity can commence.

Comment Number: 51- Fi-8

Docket Number: LD12 - L0007

Commenter: THE CHEMICAL MANUFACTURERS ASSOCIATION

Issue: PERMITTING

Subissue: PROMULGATE UNDER HSWA A MINOR PERMIT MODIFICATION

Comment:

CMA urges the Agency to promulgate the new listing under HSWA and, in so doing, designate its incorporation in permits as a minor or Class I modification. Such action will assure the new waste code is immediately effective in all states and permits are modified expeditiously. Otherwise, any benefit will depend on when and if a state adopts the new code and whether a state has adopted the permit modification rules.

Comment Number: 51-Fi-8

Docket Number: LD12-L0007

Commenter: The Chemical Manufacturers Association

Issue: Permitting

Subissue: Promulgate Under HSWA as a Minor Permit Modification

Response:

It would appear that listing multi-source leachate by a separate waste code necessitates amending many RCRA permits that do not already include a narrative description for multi-source leachate and multi-source leachate treatment residues. In addition, the designation of multi-source leachate as a single waste code may require some modification to existing permits in order to treat, store, or dispose of the new waste code. Commenters requested that such permit modifications be considered a Class 1, or minor permit modification and that it be considered a HSWA regulation immediately effective in authorized states. EPA agrees that such modifications are appropriately achieved through the procedures in 40 CFR 270.42(g). These procedures require the submission of a Class 1 modification by the date on which the waste becomes subject to the new requirement (August 8, 1990). The regulations further specify a subsequent submission of a Class 1 or Class 3 permit modification request, if appropriate. EPA believes that a Class 1 submission is all that is required when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes that heretofore were carried-through to the leachate. If a facility wants to make additional operation changes or introduce the leachate into units not previously permitted to manage the waste, then the appropriate modification procedures would apply before the activity can commence.

Comment Number: 51-Fi-9

Docket Number: LD12-00164

Commenter: INSTITUTE OF CHEMICAL WASTE MANAGEMENT

Issue: PERMITTING

Subissue: PROMULGATE UNDER HSWA AS A MINOR PERMIT MODIFICATION

Comment:

The Institute is concerned that should the Agency adopt a single code for multi-source leachate, few states will readily include this new code in their regulatory programs. Thus, the Institute strongly believes that development and implementation of such a code must be considered a HSWA provision. In that way, the provision would be effective in all states upon promulgation.

Comment Number: 51-Fi-9

Docket Number: LD12-00164

Commenter: Institute of Chemical Waste Management

Issue: Permitting

Subissue: Promulgate Under HSWA as a Minor Permit Modification

Response:

It would appear that listing multi-source leachate by a separate waste code necessitates amending many RCRA permits that do not already include a narrative description for multi-source leachate and multi-source leachate treatment residues. In addition, the designation of multi-source leachate as a single waste code may require some modification to existing permits in order to treat, store, or dispose of the new waste code. Commenters requested that such permit modifications be considered a Class 1, or minor permit modification and that it be considered a HSWA regulation immediately effective in authorized states. EPA agrees that such modifications are appropriately achieved through the procedures in 40 CFR 270.42(g). These procedures require the submission of a Class 1 modification by the date on which the waste becomes subject to the new requirement (August 8, 1990). The regulations further specify a subsequent submission of a Class 1 or Class 3 permit modification request, if appropriate. EPA believes that a Class 1 submission is all that is required when a permit is simply being changed by substituting the F039 waste code for the multiple waste codes that heretofore were carried-through to the leachate. If a facility wants to make additional operation changes or introduce the leachate into units not previously permitted to manage the waste, then the appropriate modification procedures would apply before the activity can commence.

Comment Number: 51-Fii-1

Docket Number: LD12-00107

Commenter: NATIONAL ASSOCIATION OF MANUFACTURERS.

Issue: PERMITTING

Subissue: OPPOSE REQUIREMENT TO REOPEN HAZARDOUS WASTE DISPOSAL PERMITS

Comment:

Treatment of Multi-Source Leachate

NAM member companies involved in Superfund cleanups or that own/operate RCRA land disposal facilities are concerned about the Third Third rule's provisions on multi-source leachate. EPA has decided that leachate derived from the disposal of listed hazardous wastes is a hazardous waste itself. Multi-source leachate, which is leachate derived from the disposal of more than one listed hazardous waste, can be subject to LDRs if it is removed from a land disposal unit for disposal after the date on which the land disposal prohibition is effective for the hazardous waste from which it is derived.

EPA offers for public comment two options for treatment of such leachate: (1) apply to the leachate those treatment standards for the wastes from which it is derived; or (2) apply one set of wastewater treatment standards for all multi-source leachate and treatment residues.

In general, EPA's proposed treatment standards will have devastating economic and practical consequences to industry because many Superfund site cleanups, as well as corrective actions at RCRA facilities, require the collection and treatment of leachate. Industry might have to contend with over 200 concentration-based constituent standards applicable to some multi-source leachate. NAM opposes any requirement that would require the reopening of hazardous waste disposal permits. This could create pandemonium in the RCRA waste disposal permit program.

EPA will find that developing and implementing these standards will be difficult and expensive for itself and for parties responsible for the treatment. Leachate generated by a landfill can be enormous. The associated costs added to the already expensive task of remediating Superfund sites or RCRA disposal facilities will create a staggering new problem for both industry and the U.S. government to solve.

Comment Number: 51-Fii-1

Docket Number: LD12-00107

Commenter: National Association of Manufacturers

Issue: Permitting

Subissue: Oppose Requirement to Reopen Hazardous Waste Disposal Permits

Response:

Once the multi-source leachate standards are promulgated, any facility treating multi-source leachate would need to have its permit amended so as to allow it to take virtually every listed waste if the waste code carry-through principle were applied to multi-source leachate. This is because most treatment facilities are not currently permitted to treat every waste code which would be present in their multi-source leachate. However, the Agency has decided to establish a separate waste code for multi-source leachate, F039, with one set of wastewater and nonwastewater standards. Under this option, permits must be revised; however, they will only have to have one waste code, F039, added to them. Further, EPA has noted in the preamble that Class 1 through 3 permit modifications are appropriate and will be used by EPA to implement such HSWA requirements in authorized and unauthorized states.

1/2

Comment Number: 51-Gi-1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY

Issue: OTHER

Subissue: ALLOW COMBINATION OF LEACHATES TO FACILITATE TREATMENT

Comment:

III.A.7.a.(2)
Multi-source leachate — applicability

In Section III.A.7.a.(2) EPA clarifies the applicability of the treatment standards for multi-source leachate. The Agency specifies three interpretive principles for determining when the multi-source leachate standards are applicable. GCA believes that strict adherence to the second of these principles could, in some cases, require redundant and unnecessary treatment.

The applicability of the multi-source leachate standards should encompass a mixture of compatible wastes from different landfill cells, even if some of the cells contain only one type of listed waste.

The second interpretive principle stated in the preamble is that: "...(2) Single-source leachate (i.e., leachate derived-from only one waste code such as might be expected from a monofill) cannot be combined to create multi-source leachate;"

This interpretation appears to prohibit mixture and combined treatment of wastewater from separate cells in a landfill facility, if all or some of such cells contained wastes identified by a single code. This would mean that even if all of the constituents in a leachate from a single-waste cell were identical to those in multi-source leachates from other cells, the leachates could not be mixed and treated in a combined system. Because many of the wastewater standards for the listed wastes are incorrectly based on incinerator scrubber water, the BDAT limits are lower for such waste constituents than the limits for the same constituents for multi-source leachate. This interpretation makes no sense from a technical standpoint, since the constituents would actually be treatable by the same technologies to the same residual concentrations.

Cont.

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Comment Number: 51-Gi-1

Docket Number: LD12-00151

Commenter: GULF COAST WASTE DISPOSAL AUTHORITY (continued)

Issue: OTHER

Subissue: ALLOW COMBINATION OF LEACHATES TO FACILITATE TREATMENT

Comment:

GCA recognizes that the Agency is concerned that mixing of single-source leachate with multi-source leachates could result in dilution and thus would forestall treatment. However, this problem can be dealt with by an appropriate interpretation on when such waste mixing is appropriate. GCA recommends that EPA make it acceptable to combine single-source and multi-source leachates at a facility, when such combination is made for the purpose of subsequent treatment.

Comment Number: 51-Gi-1

Docket Number: LD12-00151

Commenter: Gulf Coast Waste Disposal Authority

Issue: Other

Subissue: Allow Combination of Leachates to Facilitate Treatment

Response:

EPA reiterates that single-source leachate (i.e., leachate derived from only one listed waste such as might be expected from a monofill) cannot be combined single-source or multi-source leachate from another landfill unit in order to create multi-source leachate. (If such combination occurs, the stricter treatment standard would control (see 40 CFR 268.41(b)). Any other rule, in the Agency's view, would create opportunities to potentially evade the treatment standards, and would vitiate some of the objectives of greater simplicity and ease of understanding that EPA is trying to achieve by having multi-source leachate under one waste code with its own treatment standard. The Agency agrees, however, that it is permissible to combine various multi-source leachate streams at one facility in order to facilitate treatment, so long as the treatment does not constitute land disposal. This approach is possible since all multi-source leachates, regardless of their origins, are subject to the same standards for the BDAT List constituents.

If a landfill facility has dedicated cells within the landfill unit that contain single-source leachate, however, it may be that such leachate could be combined for treatment as long as it was not done for the purpose of evading a stricter treatment standard, since the different cells make up one landfill unit. This is a site-specific determination that is best addressed by the permit writer, who knows the circumstances of the facility. (The Agency is also allowing the permit writer to make other site-specific determinations in regard to waste analysis and constituents to be monitored in multi-source leachate.) Such a determination could be made, however, only in the case of dedicated cells within one landfill unit.

The commenter acknowledges that mixing single-source and multi-source leachate could result in dilution that would forestall treatment. The commenter goes on to state that it should be allowable to combine single-source and multi-source leachate at a facility. The Agency does not agree. In such a scenario, there is no way to monitor if treatment of one is compatable with the other or if it actually results in substantial treatment of all constituents.

Comment Number: 51-Gi-2

Docket Number: LD12-00173

Commenter: CH_2M HILL

Issue: OTHER

Subissue: ALLOW COMBINATION OF LEACHATES TO FACILITATE TREATMENT

Comment:

The Committee agrees that single-source leachate should not be combined to create multi-source leachate. However, some members of the Committee currently combine leachates from several sumps at a facility prior to treatment. This practice has worked well. Any change from current practice would disrupt present treatment systems for no beneficial reason. Therefore, the Committee believes that the final regulation should permit the combination of leachates at a facility if it facilitates effective treatment.

Comment Number: 51-Gi- 2

Docket Number: LD12-00173

Commenter: CH2M Hill

Issue: Other

Subissue: Allow Combination of Leachates to Facilitate Treatment

Response:

EPA reiterates that single-source leachate (i.e., leachate derived from only one listed waste such as might be expected from a monofill) cannot be combined single-source or multi-source leachate from another landfill unit in order to create multi-source leachate. (If such combination occurs, the stricter treatment standard would control (see 40 CFR 268.41(b)). Any other rule, in the Agency's view, would create opportunities to potentially evade the treatment standards, and would vitiate some of the objectives of greater simplicity and ease of understanding that EPA is trying to achieve by having multi-source leachate under one waste code with its own treatment standard. The Agency agrees, however, that it is permissible to combine various multi-source leachate streams at one facility in order to facilitate treatment, so long as the treatment does not constitute land disposal. This approach is possible since all multi-source leachates, regardless of their origins, are subject to the same standards for the BDAT List constituents.

If a landfill facility has dedicated cells within the landfill unit that contain single-source leachate, however, it may be that such leachate could be combined for treatment as long as it was not done for the purpose of evading a stricter treatment standard, since the different cells make up one landfill unit. This is a site-specific determination that is best addressed by the permit writer, who knows the circumstances of the facility. (The Agency is also allowing the permit writer to make other site-specific determinations in regard to waste analysis and constituents to be monitored in multi-source leachate.) Such a determination could be made, however, only in the case of dedicated cells within one landfill unit.

The commenter acknowledges that mixing single-source and multi-source leachate could result in dilution that would forestall treatment. The commenter goes on to state that it should be allowable to combine single-source and multi-source leachate at a facility. The Agency does not agree. In such a scenario, there is no way to monitor if treatment of one is compatable with the other or if it actually results in substantial treatment of all constituents.

Comment Number: 51-Gii-1

Docket Number: LD12-00214

Commenter: BROWNING-FERRIS INDUSTRIES

Issue: OTHER

Subissue: SUPPLEMENTAL NOTICE

Comment:

A. The Need for Supplemental Notice on the Leachate Standards.

As the Agency notes, it has not yet had the time to review thoroughly the data on multi-source leachate presented to it by BFI and others. 54 Fed.Reg. at 48463 ("these data have been placed in the administrative record for today's notice but have not yet been analyzed for impact on the treatment standards proposed in this notice"). That is obviously a precondition for the development of the leachate standards. We request, therefore, that when the Agency has formed its tentative conclusions on the appropriate standards based on the data, it issue a supplemental notice setting forth its proposal. That step is clearly required in order to provide BFI and others a meaningful opportunity to comment on the multi-source leachate standards.

Comment Number: 51-Gii-1

Docket Number: LD12-00214

Commenter: Browning-Ferris Industries

Issue: Other

Subissue: Supplemental Notice

Response:

The Agency will not be submitting a supplemental notice for Third Third regulations. The Agency is subject to a statutorily imposed schedule that does not provide enough time to publish a supplemental notice. If treatment standards are not developed for Third Third wastes (including multi-source leachate) by the statutory deadline of May 8, 1990, the wastes would be prohibited from land disposal.

The Agency made every effort to provide other interested parties the opportunity to comment on this data. It was immediately placed in the public record for reply comment. Copies of the data were made available upon specific request. When these copies were sent to requesters, they were given an addition 21 days from the date of mailing to submit written comments (which have been included in the response to BDAT-related comments documents). EPA has also considered and responded to the vast majority of the comments that were submitted after the January 8, 1990 cut-off date for the public comment period (over 300 late comments were received). Furthermore, the Agency has maintained close contact throughout the proposal and public comment period with the Leachate Committee and other interested parties on issues relating to multi-source leachate.

Comment Number: 51-Giii-1

Docket Number: LD12-0009D

Commenter: INTERNATIONAL TECHNOLOGY CORPORATION

Issue: OTHER

Subissue: CHARACTERIZATION OF WASTES PLACED IN PRE-RCRA UNITS

Comment:

Multi-source Leachate

IT owns RCRA land disposal facilities which produce multi-source leachate and is particularly concerned with the Agency's approach to this issue.

EPA has stated that the date of disposal is irrelevant and that the "status of wastes as listed by hazardous wastes... is determined by what the wastes are, not by when the wastes were originally disposed", 54 FR 48462. IT requests that EPA explain how the regulated community is to address characterization of wastes in pre-RCRA solid waste management units with respect to listed waste codes. What level of effort will EPA require owners/operators to expend in old records research or generator surveys? This policy presents a compliance dilemma because the owner/operator will not be able to certify that he has complete knowledge of all U, P, and K waste codes applicable to a waste derived from a commercial, industrial or municipal waste landfill. If additional information is discovered after a diligent effort to determine which subsequently listed wastes were placed in the unit, is it the Agency's position that enforcement action for improper waste characterization, treatment, or land disposal of residuals is appropriate?

Comment Number: 51-Giii-1

Docket Number: LD12-00090

Commenter: International Technology Corporation

Issue: Other

Subissue: Characterization of Wastes Placed in Pre-RCRA Units

Response:

Multi-source leachate derived from a landfill which may have received listed hazardous wastes is subject to the multi-source leachate standards being promulgated in the Third Third rule. This is true whether or not the wastes were regulated as RCRA listed hazardous wastes at the time of disposal in the landfill. If the multi-source leachate from that landfill exceeds the treatment standard for any BDAT List constituent then the leachate must be treated to comply with the established standards prior to land disposal. This point has already been established and upheld by the D.C. Circuit, and is not being reopened for reconsideration.

This is an issue of fact, however, to be determined in particular cases. There are also a number of directives issued pursuant to CERCLA providing more specific guidance. Because multi-source leachate is a listed waste (F039), however, with separate wastewater and nonwastewater standards and is no longer subject to the waste code carry-through principle, it will not be necessary to completely characterize the wastes that were originally disposed in the hazardous waste landfill in order to determine the appropriate treatment standard (in fact, the final approach was adopted, in part, to respond to just such a scenario).

Comment Number: 51-GIV-1

Docket Number: LD12-00090

Commenter: INTERNATIONAL TECHNOLOGY CORPORATION

Issue: OTHER

Subissue: CLARIFICATION OF "CONTAMINATED WITH" REGARDING MULTI-SOURCE LEACHATE AND GROUNDWATER

Comment:

Secondly, EPA has stated that "Ground water contaminated with multi-source leachate must comply with the multi-source leachate standards "(ibid). This extension of the LDR program to a large volume of often marginally contaminated material poses several problems. IT requests the Agency clarify its term "contaminated with". Does this mean any change in ground water quality attributed to a waste management unit containing listed or characteristic wastes or is it limited to impact by hazardous constituents listed in 40 CFR 264 Appendix IX? Is there a concentration limit that applies? Based upon the recentness of the Chemical Waste Management v. EPA [869F.2d at 1539-40 (D.C. Cir 1989)] case and the number of existing and proposed ground water remediation actions, IT believes that EPA has grossly underestimated the volume of wastewater and non-wastewater wastes which will fall under the multi-source leachate standards. Therefore, IT requests that EPA re-evaluate whether their estimate of "very low volumes of surface-disposed multi-source leachate wastewaters" adequately addresses ground water and demonstrate where sufficient capacity exists or include multi-source leachate wastewaters in a national capacity variance.

Comment Number: 51-Giv-1

Docket Number: LD12-00090

Commenter: International Technology Corporation

Issue: Other

Subissue: Clarification of "Contaminated With" Regarding Multi-source Leachate and Groundwater

Response:

In response to the commenter regarding the status of groundwater that is contaminated with multi-source leachate, EPA clearly stated at proposal, that such a groundwater/multi-source leachate mixture is a hazardous waste so long as the multi-source leachate is contained in the groundwater. See Chemical Waste Management v. EPA, 869 F. 2d at 1539-40, which upholds the contained-in principle as a reasonable construction of the mixture and derived from rules. Thus, so long as the multi-source leachate is contained in the multi-source leachate/groundwater mixture, the mixture would be prohibited from land disposal until treated to meet the treatment standards applicable to the multi-source leachate (or is managed in a RCRA section 3005(j)(11) impoundment).

Comment Number: 51 - GV - 1

Docket Number: LD10-00034

Commenter: CHEMICAL MANUFACTURERS ASSOCIATION

Issue: OTHER

Subissue: USE OF EFFLUENT GUIDELINES DATABASE

Comment:

2) **Use Effluent Guidelines Data Base for Wastewater, Leachate, Groundwater**

The Agency has accumulated a large date base from well-operated treatment facilities discharging treated and pre-treated wastewater to an NPDES outfall or a POTW. This data base could be used to derive treatment levels for wastewaters, leachate, and groundwater. This would allow land disposal of wastewaters which have been treated by methods recognized as BAT under the Clean Water Act.

While not all constituents for which hazardous wastes have been listed are represented in the OCPSF data base, a significant number are. The use of these values to establish BDAT levels, where appropriate, would reduce the number of wastes subject to the hard hammer.

Comment Number: 51-Gv-1

Docket Number: LD10-00034

Commenter: Chemical Manufacturers Association

Issue: Other

Subissue: Use of Effluent Guidelines Database

Response:

The Agency supports the use of Office of Water data and in particular the Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) database. Office of Water data were evaluated for use in setting BDAT standards for many organic constituents and where available promulgated ITD limits were used as BDAT. Some revisions to proposed standards based on an ITD limit were made when industry submitted leachate treatment performance data was used in preference to the ITD data to set a BDAT standard.

Comment Number: 51-Gvi-1

Docket Number: LD12-00128

Commenter: VULCAN MATERIALS COMPANY

Issue: OTHER

Subissue: DELAY IN MULTI-SOURCE LEACHATE RULE

Comment:

Multi-Source Leachate Standards

It would have been reasonable to have delayed this discussion and proposed modification relative to the treatment of leachate from multi-sources to a later rulemaking. While very important issues are addressed in this section, their resolution is not particularly associated with the deadlines associated with the mandates of the 1984 HSWA amendments.

Comment Number: 51-Gvi-1

Docket Number: LD12-00128

Commenter: Vulcan Materials Company

Issue: Other

Subissue: Delay in Multi-source Leachate Rule

Response:

Based on the derived-from rule, multi-source leachate is a listed prohibited hazardous waste. While the Agency has decided to classify multi-source leachate as a separate waste code, F039, this does not change this wastes' status as a prohibited listed waste. Regulation of multi-source leachate had previously been postponed until the Third Third rulemaking, which in effect subjected this waste to the statutory deadline date of May 8, 1990. Therefore, unless treatment standards were established in the Third Third final rule, all multi-source leachates derived from wastes in the First, Second, or Third Third would be banned from land disposal (treatment standards for leachates derived from solvents, dioxins, and California list wastes were previously subject to treatment standards).

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Comment Number: 51-G vii-1

Docket Number: LD10-00034

Commenter: CHEMICAL MANUFACTURERS ASSOCIATION

Issue: OTHER

Subissue: DE MINIMUS EXEMPTIONS

Comment:

III. APPROACHES THAT REDUCE THE APPLICABILITY OF THE HARD HAMMER

A. DE MINIMUS EXEMPTIONS FROM SUBTITLE C FOR LEACHATE OR GROUNDWATER

Many owner/operators are involved with processes that manage leachate or groundwater contaminated by leachate. Such leachate may be derived from secure land disposal management (i.e. from above containment liners) or from remediation of releases that occur from waste management units or spills. In any case, the leachate may derive from a listed hazardous waste and thus be subject to RCRA Subtitle C. In many situations, these usually-dilute leachate or contaminated groundwater flows are treated in on-site wastewater treatment or pre-treatment units and make up a minor part of the total feed to such units. For this reason, concentrations of leachate-derived hazardous constituents in the combined influent, and certainly within the treatment unit or the effluent, would be expected to be quite low.

cont

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Comment Number: 51-6vii-1

Docket Number: LD10-00034

Commenter: CHEMICAL MANUFACTURERS ASSOCIATION (Continued)

Issue: OTHER

Subissue: DE MINIMUS EXEMPTIONS

Comment:

EPA has already recognized that mixtures of de minimis losses of listed commercial chemical products or chemical intermediates and wastewaters which are subject to regulation under Section 402 or Section 307(b) of the Clean Water Act are not hazardous wastes. See 40 CFR 261.3(a)(2)(iv). Such losses are exempted from Subtitle C regulations.

EPA should consider similar exemptions for leachate or contaminated groundwater contributed to wastewater at de minimis levels. To prevent abuse, the volume of TOC contributed by a leachate to the combined wastewater might be limited to a reasonable volume percentage or concentration. Another alternate approach for Agency consideration might be to limit concentrations of hazardous constituents in such exempted de minimis leachate/groundwater streams to those levels otherwise already present at the headworks of the treatment or pretreatment units. This approach would assure that the leachate flow would not increase risk to health and the environment in any manner; it is also consistent with a similar rationale utilized by EPA in its support of continued use as

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Comment Number: 51 Gvii-1

Docket Number: LD10 - 00034

Commenter: CHEMICAL MANUFACTURERS ASSOCIATION (Continued)

Issue: OTHER

Subissue: DE MINIMUS EXEMPTIONS

Comment:

fertilizer of certain K061 wastes. EPA reasoned properly that such use was warranted because zinc and other metals were present at levels similar to that in fertilizers that did not contain K061 waste. 53 Fed. Reg. 31164/1 (August 17, 1988).

In any event, such exempted de minimis leachate/groundwater wastewaters would not be subjected to Subtitle C or hard hammers.

Comment Number: 51-Gvii-1

Docket Number: LD10-00034

Commenter: Chemical Manufacturers Association

Issue: Other

Subissue: De Minimus Exemptions

Response:

EPA is not considering any de minimus exemptions for listed hazardous wastes under the Third Third Rule. All considerations of de minimus levels for hazardous wastes will be handled under a separate de minimus rule at a future date and is outside the scope of this rulemaking.

Comment Number: 51-Gviii-1

Docket Number: LD12-00129

Commenter: OLIN CHEMICALS

Issue: OTHER

Subissue: BDAT VS. BAT EFFLUENT GUIDELINES

Comment:

General Comment: BDAT vs. BAT Effluent Guidelines

Olin would like to take this opportunity to disagree with USEPA in that BDAT Treatment Standards are transferrable to BAT Effluent Guidelines. This rulemaking and establishment of BDAT in no way resembles the establishment of BAT and industry specific Effluent Guidelines. The water division takes great pains in developing effluent data and treatment data in establishing BAT. It is not an accepted principle in BAT to say that one stream is the same as another and therefore the treatment technology is transferrable. Olin is vehemently opposed to the use of BDAT as BAT and believes that the OSWER is exceeding its authority to state that they are equivalent or transferrable.

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Comment Number: 51-Gviii-1

Docket Number: LD12-00129

Commenter: Olin Chemicals

Issue: Other

Subissue: BDAT vs. BAT Effluent Guidelines

Response:

The Agency disagrees with the commenter's assertion that the establishment of BDAT in no way resembles the establishment of BAT; there are similarities between BDAT and BAT. The commenter says that it is not an accepted principle in BAT to say that one stream is the same as another and therefore the treatment technology is transferrable. Such transfers were used for the establishment of BAT in the Commercial Metals database. In addition, for purposes of the Organic Chemicals, Plastics, and Synthetic Fibers regulations, certain limits were transferred from metals finishing while other limits were based on the treatability of similar pollutants. In developing BDAT, EPA's Office of Solid Waste appropriately considered a variety of data sources (and this approach was supported by other commenters). When treatment data is similar to wastes addressed under the land disposal restrictions, transfers from BAT to BDAT are, in certain cases, appropriate.